Reviewed: Picasso IV • Make CD • Turbo Print 5 • Net Connect

CU

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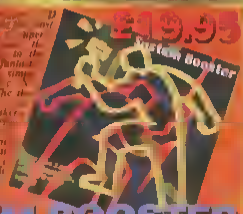

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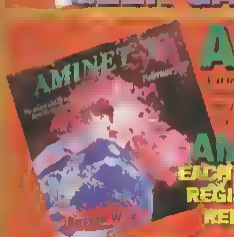

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COVER DISK AND CD-ROM DUPLICATION BY DISKPRINTS

Editorial

A new owner has appeared from nowhere but will this give the Amiga a launch pad for the future or just another round in the game of corporate pass-the-parcel? Check the news feature and make up your own mind. In the mean time get your A1200 souped up with Zorro slots (page 30) and why not get yourself a cheap-ish CD-ROM writer while you're at it (page 24)?

We've also got a sneak test of PCx and also PC-Task with the desirable Picasso IV sharing top billing in the reviews section. On the games front we've unearthed a healthy selection of forthcoming attractions and there's still all your usual favourites to get stuck into as well.

Tony

Tony Horgan, Editor

Features

24 CD-R Evolution

You can cut CDs with your Amiga now for just a few hundred quid. There's even software to do just that on this month's CD! We investigate the many possibilities of this exciting new technological advance.

30 Build Your Own Tower – part 3

Introducing Zorro! As we conclude our guide to transplanting an A1200 into a tower system, we get serious with a look at how you can add Zorro power and the endless new avenues that will be open up to you.

Special News Report

18 Gateway Amiga Updata

We broke the news exclusively last month, now we follow up with a close look at the company behind the cow print and the golden G. What plans have they announced for the new Amiga International, and how is this aquisition likely to affect us all? Our top reporters hit the road to bring home all the facts and canvas some opinions on the most significant deal for years.

Cover Disks & Super CD-ROM

5 Pro Page 4.1

You read it right: the classic Amiga DTP system is yours with this issue of CU Amiga, with the complete program on both CD and floppy disk editions. This is professional desktop publishing at its best.

6 Pro Page 4.1 extras & The Sun

Bringing up the rear of ProPage with some additional files and support data both floppy and CD editions also come complete with the enchanting cerebral sheet 'em up The Sun.

12 Super CD-ROM 11

Back once again: this time compatible even with buggy CD file systems, Super CD-ROM 11 has over 550Mb of software, plus two totally exclusive audio tracks to be played on any standard hi-fi CD player. Utilities, mods, graphics, games, demos, it's all here.

News

16 All the latest about Gateway and the Amiga, a big report from the coincidentally-named Gateway Amiga show, plus regular news too.

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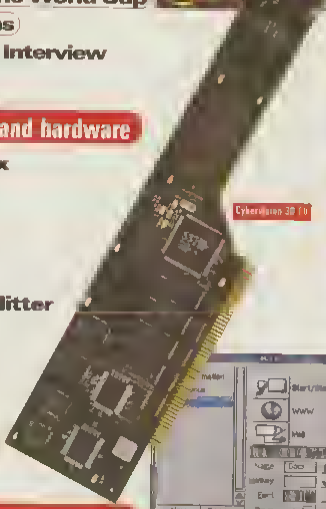
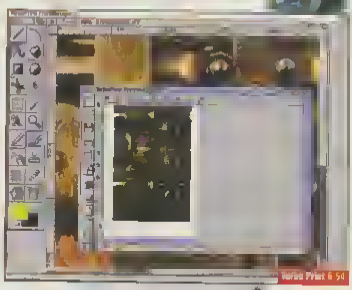
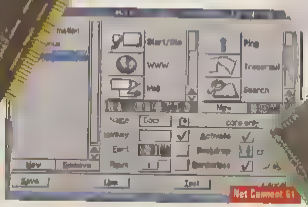
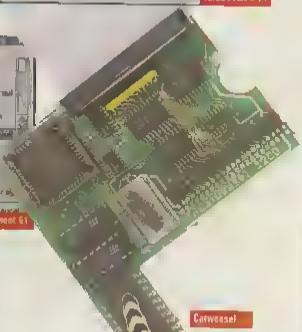
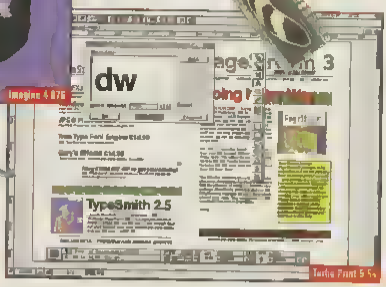




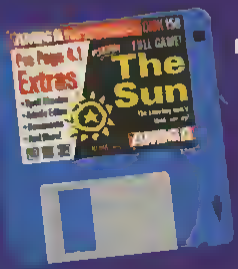






The Sun

(or You Cannot Be Sirius)



Mayba it was something wa ate, but wa think this gama is one of tha frashest, most original pieces of PD for agas. Join the Sun-Charlot of Amun-Re as it journays across tha Duat, the anciant sky-realm of ancient Egypt, in a gama which is as ralaxing as Tetris and as manic as Llamatron.

Getting started

Stich the disk in your drive and boot up. After a few moments quotations from Ecclesiastus and the Pyramid texts appear on the screen. Read them carafully, they are very important. Now press fire, watch the bizarre title page just long enough to see it go mental, and press fire to play. The icons at the top can be used to get instructions, choose music or FX, or play the game. Check out the readme on this disk from Workbench to see how to install it to hard drive.

We [illegible] thing our heads [illegible] ng to decide wha to [illegible] on the gam [illegible] disk th s month. There are a few very nice looking things kicking about but they were all large on I we needed somethi g small enough to allow Pro Page to fit. We were sitting in front of th s manic little puzzle game that go sent into the PD department and running through all the options. Blasting away at multicoloured glyphs we had to reject them all one by one. Disaster! We would have no game disk this month! No games were small enough that were any good th s month. What could we wait a minute!

Th s game is great. Not take over your life sort of great just give it a blast every now and again and you'll never get bored of it great. Author Matt West of aIXS software disagrees he thinks it s not too hot. But then he wrote this thing so he must be crazy.

You are the Sun and about you orbit eight planets each represented by a different glyph. By moving the joystick left and right the planets are made to orbit round you. Every time you shoot a glyph it changes [illegible] through the cycle Hand Kids Cat Dog Star Rabbit UFO Emu. In the top right corner of the screen you will see a target glyph. To win the round you must turn all of the planets into the same target glyph simultaneously.

If this sounds easy it is because I have not yet told you that while all this is happening the planets are drawing towards you and dragging you down towards the Horizon. If the sun sets the game is over. Shooting the glyphs pushes them away from you temporarily. The closer the planets get to the sun the quicker it sets so you will often find yourself forced to shoot glyphs you have turned into the target glyph before you are ready. If you shoot one which is the same shape as the target glyph it and any others of that shape will change to a random glyph and the Sun will rise back up a little depending on how many glyphs currently match the target.

There is more the bar vault game wild glyphs but you'll just have to read the instructions. It s not as complex as it sounds. Think of the old vector based co-op Tempest and you'll get the gist.

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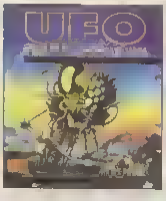
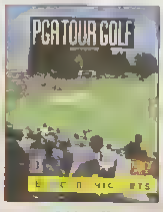


UFO

You have control of Xcom an organisation formed by the world governments to fight the ever increasing alien menace. Use your forces to fight the alien menace and devise a strategy to save the earth

Wing Commander

You're a starfighter pilot, the best of the best, but nothing in your training prepared you for action like this.



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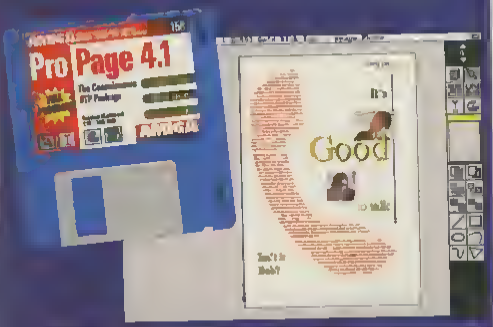
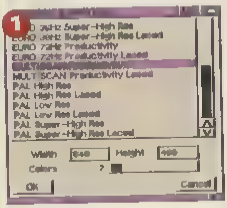
Pro Page 4.1

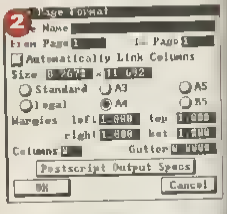
The Amiga's flagship DTP application comes your way this month exclusively with CU Amiga. Introducing... ProPage 4.1.

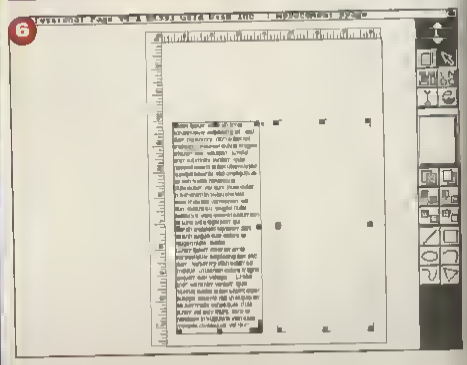


Over the years Professional Page has been the choice of many leading desktop publishers. Amiga magazines likes of Amiga Monthly, Amiga Format and AmigaEm are all produced with Professional Page. In fact, one of the leading glossy Amiga magazines, Amiga News, is also produced using this great application. It's that good and now you can join in the fun and use this great program for your own publishing needs.

Professional Page 4.1, affectionately known as ProPage, is a page layout program published by Gold Disk (now defunct) and allows you to [illegible] everything







▲ The quality and clarity of output from ProPage is limited only by your output device!

from [illegible] look. The product [illegible] interface one [illegible] Amiga like but is also very [illegible] especially when run in black and white.

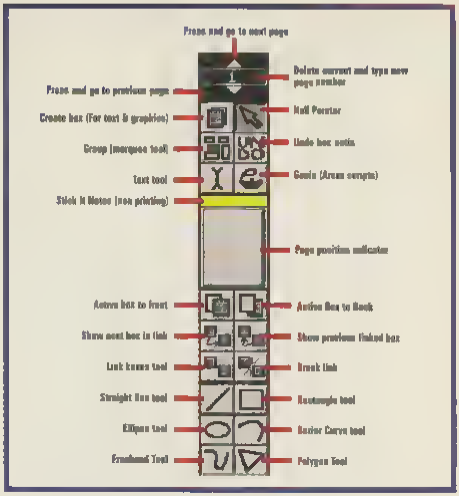
The concept

The concept behind using ProPage is based on boxes for all your elements. Take text for example. Frames contain text can be linked so the text flows from column to column and page to page. These columns can be different sizes. ARexx is also a powerful feature with. Gen es letting you automate many functions. Just one example is a gen e that creates a drop shadow. There are many more gen es that come with the program as well as a disk containing even more genres from the gen e us Don Cox available from LH Publishing.

Printing using PostScript or non PostScript printers is another highlight with this great piece of software. ProPage will work with both TurboPrint and Studio II as well other normal Amiga printer drivers. One interesting function is a set of off-set gadgets in the Non-PostScript printer requester which lets you position the page in the right place on your paper. Those wanting to use PostScript will find support for black and white printing as well as spot and process colour separations. To help make creating the text for your document easier ProPage comes with its own text based word processor called AE (Article Editor) and for the colour con science a Pantone colour library with thousands of ready made colours. As you can see this is a very powerful program. In short Professional Page will help you create pages that look the business.

Getting started

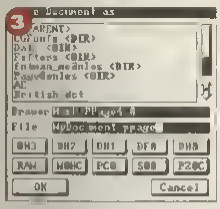
When you run ProPage for the first time it will ask you to select a screen mode for the program. After that is done the program will load but before you can start doing the business you will need to create a page or two. To do this choose the Create From Default item from the Page menu (second menu from left). Turn off the Automatically Link Columns button and click OK. You now have a blank single page document. It is best to save it from the project menu at this point. When giving documents a name it is advisable to use the extension ppage so you know it is a ProPage document. Now that you have saved your page you can continue creating your document pausing every now and then to press the Right Amiga S keys so that your document is again saved to disk.

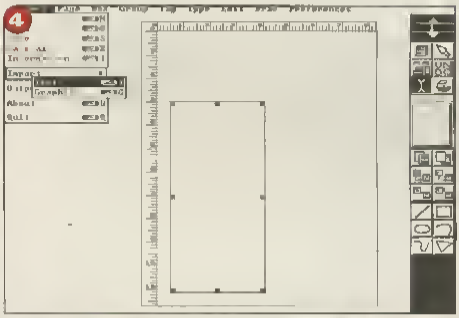


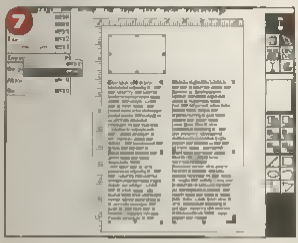
Item boxes

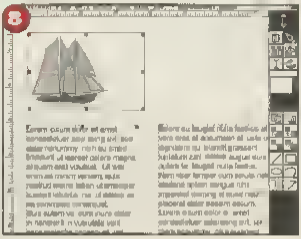
All objects in ProPage must be placed into a box. This has a number of advantages. Unlike QuarkXPress where you have different boxes for text and graphics in ProPage the same type of box is used for both text and graphics with ProPage automatically recognising what type of element you have placed in the box. This is important to mention because if you have text in a frame when you double click on it will let you alter the tab positions while if it is a graphic in the box ProPage lets you change the scale of the image in the box.

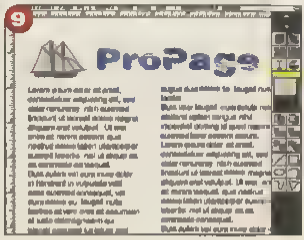
Let's tackle putting text in a box first. Before you can place text on your page you need to create a box for it. To do this you











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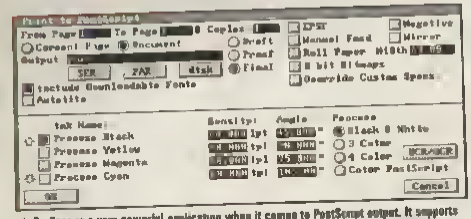
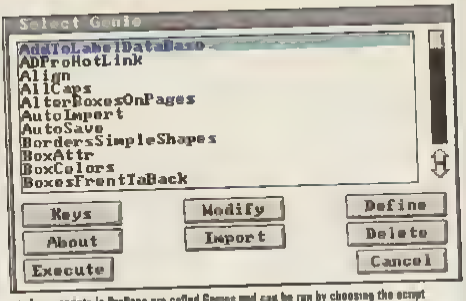


▲ ProPage is a very powerful application when it comes to PostScript output. It supports colour separations, under colour removal 24-bit bitmaps, downloadable fonts and more



▲ Arexx scripts in ProPage are called Gomes and can be run by choosing the script required and then clicking on the Execute button

select the Box tool and create a box on the page. If you can't see the box after you create it, then press Ctrl-B and Box Outlines will be turned on (or OFF if they were already on). This box can now be resized and moved anywhere on the page. To place text into this box, make sure you have a text file handy to import. The text should be ASCII. Select the Text tool and click inside that box. Choose Project/Import/text. Select an ASCII text file to import and when asked what filter to use, choose ASCII. To paste the text into the box, press F1.

Linking boxes

Before we go on, use the Null Pointer to grab the box handles and resize the box. You can see that the text reflows to adjust to a different size frame. With luck, the text file you have used will be a rather large one and will still have some text left over. You can tell this by an ups de down L in the bottom right hand corner of the text frame.

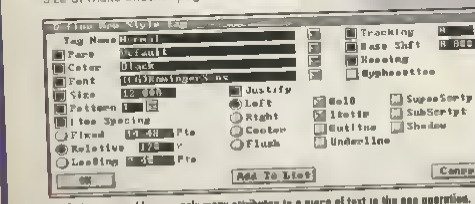
To get this text to flow into another text frame, first use the Box tool to create a second text box anywhere on the page. Using the Null Pointer, click once on the first text box to make it active. The dotted box outline will now be solid. Then select the Link Boxes tool from the toolbox and click once in the second frame. The text will flow from one box to another. If there is still more text left, you either reduce the text in size or make another page.

Adding pictures

A page with no pictures is like a cloudy day: grey and very dull. Bring some sunshine to your pages by adding a picture. This requires you to first create a box to hold the graphic. Once you have done that, select the Null Pointer, make sure your empty box is active and then choose Project/Import/Graphic. Start off by choosing an IFF-ILBM or ProDraw clip and when done, click OK. In most cases, the graphic will not fill the box. To correct this you can either alter the graphic so it fills the box or just resize the box so it is nice and tight around the graphic.

Pictures can be scaled by pressing the Alt key and using the Null pointer to stretch the box containing the graphic. ProPage supports many graphic formats such as IFF-ILBM, Illustrator 88, Art Expression EPS, TIFF, BMP, PCX and EPS and of course ProDraw clip. If you have ProDraw you can send images between ProDraw and ProPage (both have to be running) using a hotkey of Right Amiga-/.

If you want to view these images in colour and you have an AGA machine, then switch screen-mode (Preferences menu) to 256 colours. ProPage, like most Amiga programs, works slower in this mode, but is certainly a lot prettier. A point worth noting is that on an AGA Amiga running Workbench 3.1, you will get ghosting of requesters in 16 colours. This is due to some tweaking of the 3.1 ROMS. On an AGA Amiga running KS 3.0, ProPage works fine in 2, 16 and 256 colours. If you have AGA and 3.1, then you will only be able to run in 2 or 256 colours. On ECS Amigas (non-AGA), using 3.1 ROMs and no graphics card, you will only be able to run in 2 colours.



▲ Style tags enable you apply many attributes to a piece of text in the one operation. ProPage also supports paragraph style tags.

Printed output

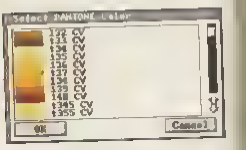
After you have finished your page you'll want to print it and this is pretty straight forward in ProPage. The printer driver used is the one you have set in Printer Prefs. If you are using Studio II or TurboPrint, it will work with these as well.

The short cut for printing to a non PostScript printer is Right Amiga-M while the short cut for printing to a PostScript device is Right Amiga-P.

ProPage uses both Amiga bitmap and Compugraphic fonts. For the best quality use Compugraphic fonts of which there are plenty about. To add new Compugraphic fonts you need to copy three files for each font into a directory called CGFonts which can be found in the PPage4.0 drawer. The files required end in the following extensions: .lib, .metric and .dat. An example of this would be "Times.lib", "Times.metric" and "Times.dat". After you have added the fonts you need [illegible] gram called CG[illegible] is in the PPage4.0 directory.

Missing fonts?

A common problem for ProPage beginners is the program can't find its fonts. In order for ProPage to know where its CGFonts are, it needs two things to be present. One is an assign in the which tells ProPage where it can find the drawer called CGFonts. The other key attribute is found in a file called "PPage.inf" which resides in the S directory. In that file is a line beginning with FE and then a space and then the path to where the CGfonts can be found. If this path is not right, you can correct it with a text editor such as Pro Page's Article Editor (AE).



That's all we've got room for this month. Larry Hickmott's regular DTP series will be covering some further aspects of the program over the coming months. If you need more information immediately, check the panel below for details on how and where to order the full manual.

Manual offer

To get the best from the many and varied powerful features of ProPage 4.0, such as genies and text tricks, you could do with getting the full instruction manual, the additional tutorial book or both together. Separately they cost £14.99 each plus P+P, or you can get both, plus a set of extras disks for £24.99. A CD version of this bundle with even more software is available for £29.99. Orders are to be made out to LH Publishing, 13 Gaintech Ave, Bletchley, MK2 3DH, United Kingdom. Please add postage of £3 in the UK, £5 for Europe and £8 for the rest of the world. For further details, telephone LH Publishing during office hours on (+44) 01908 370 230.

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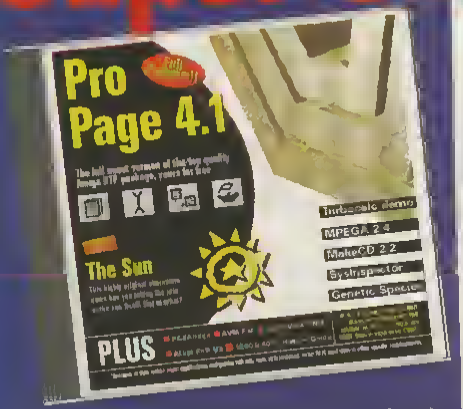
PLEASE SEE THE SECOND PART OF THIS ADVERTISEMENT ON PAGE 74 FOR OTHER PRODUCTS AND ORDERING DETAILS

Super CD-ROM 11

The new CUCD-ROM 11 is one of the best CUCDs yet, complete with ProPage 4.1 and two audio tracks.



Welcome to CUCD11. An even spread of software through all the normal departments means that CUCD11 has something for everyone. This is one of the best CUCDs yet!

CUCD11 can be booted from a CD32 or an A1200/4000 with adequate CD32 emulation. To allow you to use this CD just as well when you boot up from your own Workbench, we have included the INITCD icon, which will make various assigns to allow software to run from the CD. It also initiates MUI and the Newicons systems – so don't be surprised if the look of your Workbench suddenly changes. It is all temporary and can be removed by clicking on InitCD again. To help you find your away around the CD, there is a DOCS GUIDE, which connects you to pretty much every text document on the CD, and INDEX, a search tool which allows you to search the CD for a text string. Like everything on the CD, click on them to activate.

Making things work

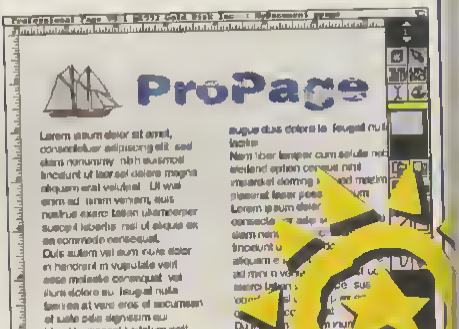
Click on a picture icon and a viewer loads up and displays the image. Click on a mod and a modplayer pops up and plays the tune. As much as possible of the software will run from the CD as well. However, some things on the disc won't run when you click on them. There are several reasons for this. If it is a picture or animation you may not have enough memory. If it is a demo it may clash with your system. If it is a utility it may need to be installed and so on. If a program doesn't activate, and no error message comes up, read the documentation.

It can get complex with games and demos. Many are written in an OS illegal fashion, which means that they may not work on every set up. Run the bare minimum Workbench and try them. If this still doesn't work, boot with no startup sequence and activate the program from the shell. You will need to [illegible]

On the disks

Professional Page 4.1

The full version of the top quality commercial Amiga DTP package can be found here. Run it from CD or drag it onto your hard drive to install. See the full instructions on page 8



The Sun

This quirky but fun amateur game was programmed by Matt West in AMOS Pro. Also see the game instructions on page 6

The audio tracks

Tl[illegible] track [illegible] the CD this month, which can be played [illegible] CD player. Don't play track 1, which is data. [illegible] or [illegible] Bernard's band, Inhaler. This song entitle[illegible] album, Volume (released on the Sa[illegible] Lil [illegible] 2030) which Kerrang! magazine descr bed as [illegible] and tect no you can't dance to!" [illegible] on A1200 running the CU Amiga [illegible] and a Megalosound [illegible] Alice 8 channel mixer a [illegible] DAI [illegible] guitars and effects units. [illegible] by our fearless editor Tony Ho[illegible] page 84

What's in your drawers?

Root: The root directory of CUCD11 is set up like a Workbench disk with all the standard directories – C Devs Libs Fonts and so on You will find that these directories are all nicely packed full of files you can use on your own Workbench if you want

There are plenty of libraries fonts and so on If you want to copy anything across to your own system just use a directory utility such as Directory Opus

The Sun: Click to play

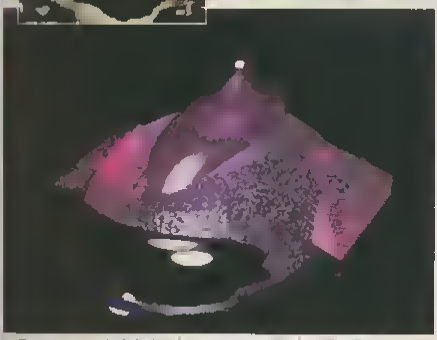
PrePage: Just drag the drawer and click on "Make_PPage in

System: Deltracker H ppoplayer GmPlay NewIcons PalNET Flick Viewtek VirusZ and more have moved into a new drawer called CDsupport in the System directory MUI and the standard Workbench system files remain in the parent

Tools: A fairly standard Workbench tools drawer

Prefs: Standard Preferences drawer with Newicon prefs

Utilities: Multiview Clock Toolsbias and some Newicon utils



▲ These pics are in the CUCD/Graphics/Pix drawer The big picture is called shuttle and is an image s a render by sam amiga, a render size/size 720 x 566 pixels

WWW: Demo versions of the major Web browsers Ibrowse 1 1 and Voyager NG are here plus the brand new Aweb 3 0 demo There are also pages to browse without a modem!

Check out CU Amiga's brand new Web site plus the usual Amiga related and general sites All you have to do is click on the Show_WWW icon and then select which browser you want to use when asked

CUCD: Here's where you'll find the really good stuff

Online: For comms heads we've got the latest version of the Microdot II E mail and news package a demo of Termite TCP and the unregistered Miami 2 accompanied by Miami Speed Meter

CD-ROM: Due to the problems with last month's CUCD10 we've got a special installer for AmiCDFS2 There's also the contents of the latest AminetCDs Atapi_PnP V3 and even more CDIDs

Graphics: For artists renderers and tinkerers alike we've got a collection of CyberGraphX goodies SuperView TNG MPEG video players and animations and yet more Icon collections!

Programming: Coders ahoy! The complete Oberon V4 for Amiga programmers the CyberGraphX developers kit latest Storm C++ demo and a lot more

Demos: Another bumper collection of demos to amuse and amaze your friends The central feature this month must be the new installment of the awesome and popular DataWorld demo

Information: Lots of hard core technical information can be found here in the form of the A1200 and A4000 hardware guides There's also an animation FAQ and an AmigaGuide to Startrek A lovely bit of bed time reading

Utilities: Utilities galore with the excellent SysInspector PC2Amiga with the latest Datatypes thrown in to boot Plenty more here to help your Amiga be more productive

Readers: We've got a great collection of readers pictures sent in from around the world If you fancy being in here yourself don't delay send your disks to us today!

Games: More fun joystick waggling to be had in here Games of all styles can be found but be sure to check out the latest preview of the forthcoming Trapped II 3D game

Magazine: To be in with current and past Magazine features we've got the latest version of the AVM Fax package and demos of the CD-R writing software MakeCD 2 2 and Burn It Not forgetting the top secret Genetic Species preview either

Previews: Check out the comprehensive demo of the top class spreadsheet TurboCalc 4 plus the IIP CD-ROMs

Sound: The latest version of the MPEGA 2 4 MPEG audio layer 3 player More MIDI tunes and some top modules round off this month's audio fest

If your CUCD does not load

If your CD does not load contact Diskxpress on 01451 810788 If they advise that the CD is faulty send it along with a SAE to: CU Amiga Magazine Disk Returns, Diskxpress, 7 Willow Court, Bourton Industrial Park, Bourton on the water, Gloucestershire GL54 2HQ

Please note that some CDs will not autoboot on systems other than CD32s, so try loading it from Workbench first.

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Bring yourself bang up to date on all things Amiga courtesy of our brand new CU Amiga Magazine web site. We've totally redesigned the whole site so that now it's bigger, better, faster and even more fun than ever before.

For those who don't yet have Internet and world wide web access, we've included the new incarnation of the site on this month's CD edition of the magazine, so go and take a look around it right now.

You'll find plenty to keep you amused and informed, including news, features, downloadable software and plenty of links.

Find out about forthcoming issues, order back issues, take advantage of our new subscription offers, chat to the CU Amiga team and check out this month's Art Gallery images at full screen size. This is just the beginning, and it's only going to get bigger and better. So what are you waiting for?

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News

SPECIAL REPORT

Gateway to the Millennium

On March 27th 1997, American PC retail giant Gateway 2000 put in a bid for Amiga Technologies. Thia bid has now been passed by the Garman regulatory body. Gateway 2000 are now, officially, ownars of the Amiga.

A press conference is scheduled for xxth May 1997 in which it is hoped Gateway 2000 will publicly announce their future plans for the Amiga range. As we reported exclusively in our additional news flyer last month Gateway 2000 are the new owners of the Amiga but the big question is what they plan to do with it. At the time of going to press they are staying resolutely tight-lipped obviously obeying strict orders from the top to say nothing not even listening to the insistent barb offered by the info hungry Amiga press and users testing for reactions to suggested moves they might make.

What we do know is that Amiga Technologies will morph into Amiga International remaining a separate company but owned by Gateway 2000.

Amiga International is to be headed by Petro Tyschtschenko, former boss at Amiga Technologies. Tyschtschenko who has been at the helm during the period since Escom's collapse last year has been involved in the Amiga since the Commodore era and is considered by the industry to be a safe pair of hands. Internet users have noticed that the Amiga Technologies web site has quietly changed its name already.

Gateway have been rather quiet on the buyout since the news hit preferring to avoid making any major announcements until they have some good idea of what they have bought. After the willingness of certain other rather less professional bidders to make bold and rather rash press announcements the international Amiga community has been rather jittery about the silence from Gateway 2000. This silence, rather than suggesting any kind of conspiracy is the reticence you would expect from a major company not willing to make bold statements before they are sure where they are going.

When pressed on the point during a questions and answers session at the Information Technology Expo held in Seattle on April 2nd Gateway's CEO Rick

Big fish eaten by bigger fish?

In a weird, such twist of the kind that only happens in real life, mere days after Gateway bought out the Amiga, the information technology business world was buzzing with rumours that Gateway itself was going to be bought out by Compaq, the world's biggest computer retailer. Rumours suggested that Compaq were looking to use some of their $3.5 billion cash reserves in a hostile takeover of one of their fastest growing rivals. The rumours lead to heavy trading of Gateway shares, and a significant increase in the share price during a period in which IT shares have generally not been performing strongly.

Before everyone panics and stories of "the Curse of Amiga" become rife, we should issue a note of caution. Rumours of this nature are the life blood of the markets, and are far more common than actual buyouts. Officials from neither Compaq nor Gateway were commenting on the rumours, but it seems more likely that Compaq would use that cash reserve on a company that was a little less highly valued in the market.

GATEWAY2000

You've got a friend in the business.

"I am convinced and know that Gatewey 2000 will giva Amiga International a very good future."

Petra Tyschtschanko, manager at AI

Snyder explained that at that point it was not possible to be specific and went on to describe the [illegible] as an equivalent [illegible] large box marked 'stuff'. He pointed out that until the [illegible] regulators passed the [illegible] they wouldn't know for [illegible] they would find of use [illegible] a further comment will [illegible] some as a reassurance [illegible] the Amiga community he [illegible] as a reason for the buyout. Gateway could not [illegible] technology like that die.

Amigas on sale

Petra Tyschtschenko has [illegible] that the most immediate [illegible] of the rebirth of the Amiga is that Amigas will soon be on sale (not only A1200s but some A4000s). It is likely that this represents a sell off of existing stock. Pricing at the moment looks to be slightly cheaper than the old Escom prices: A1200s at around £250 plus VAT, A1200HDs at £360 plus VAT. Distribution will be through the traditional Amiga channels, there are currently no plans to direct Amiga through Gateway's own distribution systems.

Phase 5 Co-operation?

It seems likely that Phase 5 and Amiga International will be linking up in some form after the close ties that were being forged just before the demise of Escom, the Amiga's former owner.

In their favour, Phase 5 have a relatively cheap instant upgrade to the existing Amiga technology in the form of their PowerUp PowerPC accelerators. If Gateway are looking to get an early foothold in the entry level computer market they would do well to tag on PowerUp cards to new A1200s or better still integrate them with a brand new or stop gap Amiga machines.

Phase 5 MD Wolf Dietrich commented "We are operating a technical co-operation which would result in nearly immediate availability of powerful and inexpensive new technology for the Amiga."

Amiga Technologies have told us that they have discussed co-operation with Phase 5 following a contact between the two companies described as being mutually instigated. Co-operation between the two companies would allow an official PowerPC Amiga based on the Walker to be produced in relatively short order. Specifications could be expected to include a PPC 603e CPU running at 133mhz, 2Mb chip and 4-8Mb fast Ram, 500k - 1Gb hard drive, CD ROM drive, AGA chipset and an HD floppy drive, and based on previous pricing could retail for around £900. The importance of the geographical proximity of Amiga International and Phase 5 (both in Germany) should not be underestimated as a factor in the success or failure of this particular development. For a first hand experience of the PowerUp cards check out the CU Amiga stand at the World of Amiga show during May 17th-18th.

A thousand possibilities...

There has been a lot of speculation on the fate of the Amiga since the Gateway buyout. Industry pundits were universally taken by surprise by the move and many have suggested reasons beyond the obvious one of a mid priced market share of the type the European market looks desperate for. We have been taking a close look at Gateway and the Amiga to see which of these theories might have a basis in fact.

Set Top Boxes: Yes, Corp wanted to buy the Amiga because they saw it as being the ideal basis for a machine to challenge the world in the set top box market. Set top boxes are a very advanced equivalent of a satellite decoder. As well as internet access a set top box would theory allow the user access to all sorts of digital services, from on-line gaming to home shopping. The highly efficient nature of the Amiga's operating system makes it able to do these functions with a considerable saving in hardware costs. Gateway have been spreading into the multimedia arena but Tyschtschenko is quoted as saying that no one plans to use the chips, motherboard or OS for anything other than Amiga computers.

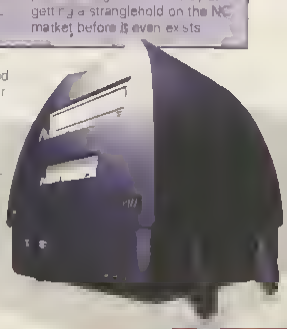
Palmtops: One industry pundit has pointed out that Gateway have no presence in the palmtop market and have suggested that Gateway wanted the Amiga technology for use in palmtops. The theory behind this would be again down to the efficiency of the operating system. Amiga OS works with very limited hardware, but the hardware which Amiga OS currently runs on is not really designed for small sizes.

Budged PCs: The cynic of the pessimistic observer thinks that the least likely option. Although the Amiga has a very good name amongst people in the know, the general computing crowd tends to think of the Amiga as a games machine.

Amiga PCI boards: The Amiga chipset and OS could be implemented on a PCI card to be used in a desktop PC. The logic behind this is in fact a little out of date – the Amiga chipset is old to stand up to the best PC chipsets, and this just leaves the OS in which case why not just code a Pentium native version of Amiga OS?

Alternative OS: There is actually some possibility that it was at least in the back of the minds of whoever decided Gateway should buy the Amiga. Gateway are known to be very Microsoft/Intel oriented retailers but the relationship is not quite as cosy as it is often assumed. Gateway investigated the possibility of buying into Mac recently, suggesting that they may be uneasy about Microsoft OS dominance.

Network Computers: Computers that are permanently connected to a network and use on line storage and processing instead of their own are the logo of thing that Amiga OS would be brilliant at doing given its high levels of hardware efficiency. What's more Motorola have a very wide range of embedded systems CPUs with built in communications hardware based on the 68xxx series. An NC running Amiga OS on such a CPU would make for a very powerful and very cheap set up. Interestingly, we have heard that Gateway's CEO Rick Snyder has voiced discontent with the way that Microsoft have been trying to prevent competition in the NC market by arbitrarily raising the specification of their Windows NT based NC OS as a proposed standard before it is anywhere near [illegible]. It is a move some pundits suggest is their way of getting a stranglehold on the NC market before it even exists.



Stateside News

by Jason Compton Editor in Chief of Amiga Report Magazine

St Louis Gateway Show report

The great history of Gateway 97 is that it was held [illegible] bankruptcy [illegible] was about to end just a week or two [illegible] was held after [illegible] 2000 had their [illegible] Amiga accepted [illegible] a little prolonged bankruptcy proceeding isn't enough to kill the spirits of many Amigans and they made the trip from all over the United States and Canada to be at the show. The show was filled with high points, the notable low point was [illegible] to attend [illegible] Paik's CEO maintains that [illegible] many people were told [illegible] would only be at the [illegible] was a bankruptcy [illegible] the date of the [illegible] of course there was [illegible] expect we now can be pretty sure we know why.

Major planning

The St Louis people took very [illegible] year to plan and it showed. Television and radio ads were used to help promote the event as were several mailings of flyers [illegible] about the show [illegible] across the country.

Two major dealers [illegible] anchored the retail [illegible] show. The biggest [illegible] Amiga who were [illegible] in their U-shaped zone. [illegible] diversity seemed to be [illegible] people commented that Nutsoft had at least one or two of everything. They had an awful lot of Insert104's, the new PC keyboard interface for big-box Amigas that Natonal is marketing.

Siamese display

[illegible] in the way of [illegible] the show [illegible] National had just [illegible] of scen dou[illegible] for the Cybe Vision 3D and [illegible] showing a line of [illegible] TVs capable of VGA [illegible] The [illegible] System [illegible] for more [illegible]

One [illegible] interesting pieces of [illegible] at the show was brought by Jim Godnow who did a lot of work for VIScorp recently. He brought a VIScorp set top box prototype which ran AmigaOS 3.1 and a development version of VIScorp's networking software. It was the first time I'd actually seen a VIScorp box work and to my knowledge the first public display of AmigaOS on a [illegible] Amiga or Draco machine in the United States. It's still not clear if anything will ever come of VIScorp's work, but Jim had proof positive that the VIScorp engineers have at least something to show for their efforts.

A few user groups set up their own area to sell general merchandise or promote specific products. Am Tech of Ohio was selling Eric Schwartz T-shirts featuring many of his cartoon creations whilst Amiga Atlanta was still selling copies of their 1 year old 10th anniversary banquet video.

Magazines

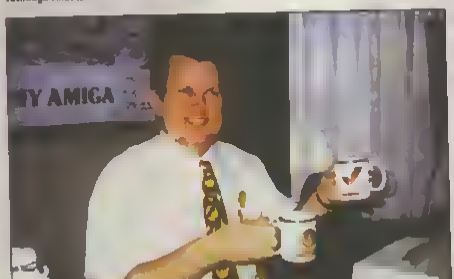
The US only remaining native newsstand Amiga magazine [illegible] computing [illegible] and the [illegible] Keith Sid[illegible] A3000 SIMM card [illegible] you have an A3000 and [illegible] to increase the [illegible] RAM, you might consider [illegible] yourself a favour and [illegible] out the AmiFast rather [illegible] rewing around trying to find ZIP memory. AC editor Don Hicks was among the most animated people at the show, working to drum up new subscriptions and new enthusiasm among the showgoers.

Product developers were well represented. Newtek sent about a half dozen technical and sales people to the show at a professionally presented booth although certainly nothing of the size they would use at a larger video industry show. They committed something of a faux pas in their choice of Lightwave hardware platform: they brought a high-speed Alpha machine running Windows NT instead of an 060 Amiga. This didn't go over well with some of the show's visitors. I can see their logic: "Well, we're showing off our flagship product, we should show it on the fastest machine we can find, right? Well, yes and no.

Nova Design, the makers of ImageFX, were there showing their demo video and selling ImageFX at a deep discount. Their new presentation guru Corinna Cohn stood on chairs every so often to draw attention to the booth. Corinna's artwork is quite good and fairly well known in the Amiga world, and Nova Design will be using her to do customized ImageFX semi[illegible] across the country.

Richard Kiernan of HiSoft was on hand Saturday and had hoped to show off Cinema4D 3 and IBrowse 1.1 but his shipment never quite showed up. He did answer questions and talk to users and developers, however. HiSoft's American distributors

▲ Nova Design maintained their presence in the Amiga scene with another showing. Although Aladdin 4D is still not with us, Kermit Woodall was on hand for questioning.



▲ Is there no end to the hunger for Amiga-related bits and pieces? Amiga mugs were just one of the Amiga badged gift ideas on sale at the show.

Otherwise, [illegible] were unable to per[illegible] they did have [illegible] a fun time and [illegible] presidents [illegible] apologizing to not be [illegible]

Anti-Gravity

A [illegible] of the [illegible] native sons Paul Nolan of Photogenics and Samurai Systems fame was hosted by Anti Gravity Products, Anti Gravity is a large dealer who focus on video products but for this show they turned their entire area over to Paul and his Samurai Systems which he [illegible] demonstrated to curious passersby. We liking it's favourite the Eagle A4000T some [illegible] American [illegible] see much. We're used to the more bland [illegible]kPak A4000Ts.

AMI Dale Larson's company famous for the book [illegible] Your Amiga and [illegible] their book To[illegible] Desktop Internet [illegible] there to sell [illegible] products at shows [illegible] units and give away Amiga and Commodore logos to their customers – a very popular promotion. While IAM has had distribution problems in the UK recently these seem to be coming to an end. The company has a new book coming soon which is difficult to describe. Its author a renowned American journalist who has lived in Mexico for the past 20 years comments on and ponders the Internet and technology and seems to tell the reader more about himself than about his chosen topic. Of course [illegible] are not a big reader you would have been more interested [illegible] the DiskSalv and MRBackup combination they were selling instead.

Silent Paw Productions was showing off the PAWS A1200 portable which is still an impressive feat. Silent Paw is apparently very unhappy with QuikPak right now over a non-payment of invoices for the QuikPak portable machines that have been heavily hyped but little seen so far. The LCD technology seems to have originated with Silent Paw and they did like their money on their screens back.

Self promotion time. Amiga Legacy was announced at the show a new videotape based

▲ Dale Larson and company proved popular with head-outs of Amiga and Commodore badges and managed a bit of promotion for the Connect Your Amiga book.

magazine to be published 5 times a year. In the remainder of 1997 I'm involved with the project and our area did attract people to check out our rolling demo tape. I think the video monitor with all the junk hot-glued to it did the trick. Legacy might be published in PAL in Europe and Australia we're discussing it with potential partners now.

Offical banquet

Various other exhibitors were in attendance as well some with small areas only [illegible] one product like Gateway and the MoneySmart program or the understaffed Soft Logik booth.

There was an official show banquet held after the first night where a panel discuss on group fielded questions from the audience. Most revolved around the survival of the Amiga and Amiga related companies. The following morning a developer meeting was held where dozens of current or potential developers discussed possible routes for cooperation and standardization of certain neglected issues, like new animation and image formats.

Kermit Woodall of Nova Design chaired the meeting which tackled the issue of establishing new and needed standards for developers such as video and animation formats. Commodore and AT never made an official part of the Amiga's operation. The issue of creating a standard mint HTML viewer as a replacement for AmigaGuide came up and unfortunately broke down quite quickly into an anti-MUI and even anti ClassAct debate. However some good energy came out of the meeting and we're looking for more to come out of the cooperation.

PowerUp

Developers and users alike were very interested in Nova Design's newest toy a Phase 5 PowerPC developer daughtercard. Nova didn't have it plugged into anything but the rather plain-looking piece of PCB was shown off briefly on the second day of the show. Nova seems geared to support Phase5's 3D and PowerPC technologies and we will hopefully see these newfeatures soon.

Announced at the show was an allegedly upcoming Amiga Ethernet card with 10BaseT and AUI hookups that would go in a Zorro slot for only US $100. If it becomes a reality it could make Amiga networking truly affordable. An A1200 version is also planned to hook up to the A1200's internal clock header much like the new HyperCOM high speed serial port does.

On both days the show organizers held raffles. While QuikPak was expected to bring a 4000T this didn't happen and a used A1200 had to be substituted by the show organizers. Nevertheless that and a number of other products including Lightwave 5 were given away and a lot of people were happier when they left then when they got there.

The mood at the show seemed very optimistic. In particular getting to meet many of the people who have brought so much to Amiga users lives was a big boost for them. Holger Kruse of Miami TCP fame was at the show and more than one person (myself included) shoved money into his hands on sight just so they could be honest and finally register Miami. I did guilt him ever so slightly first for never sending us anything for review but made him take my money all the same because Miami is just that good. There's a lesson there – if you're a shareware author whose product is popular go to Amiga events and just make sure people know who you are. They won't have any good excuses left not to give you the money.

The show's mascot" was a big yellow smiley face and the slogan was "The Smile Is Back". While not as large as the winter Toronto shows of 1995 and 1996 in this post Commodore era it was more impressive than the rest of the crop of the past few years. Everyone asked about Gateway 98 – time will tell.

Other news

In other news US based Finale Development has taken over the rights to the Voodoo e mail package and plans to bring the once-shareware package to a commercial status bundling a "lite" version with its Finale Web Cruiser WWW browser as well as selling it as a standalone package. Finale's first new products are scheduled for release starting in late spring.

Davis MacGyver of Canada has announced availability of the Chameleon tower conversion for desktop A3000s and A4000s marketed directly and through Oshawa Amiga of Oshawa Ontario Canada. While expensive (over US$500) the optional extra TBC slots (powered but not bus-connected PC slots used for TBCs and other video hardware) should prove attractive to video professionals. The towers also boast 9 drive bays and multiple fans. MacGyver also distributes a remaining stock of A-Max Macintosh emulators. A-Max was technologically left behind some time ago but the Zorro II card of the A-Max II+ and A-Max IV is one of the few things which allows access to 800k Mac floppies – if you're in need of that sort of access the US$135 is almost worth the price of admission. MacGyver can be reached at +416-285-7121 or www.interlog.com/~davmcgyv online.

Jason Compton jcompton@zoot.com
Amiga Report Magazine (847) 741-0888
FAX All on Amiga: docs/mags/ar??? the WWW http://www.caseg.org/ar/

Vulcan Software To Go CD Only

Vulcan software probably the biggest Amiga games producer in the UK have decided to convert their product on to exclusively CD ROM releases This shock announcement is bound to cause major controversy the Amiga market in this country is a bit behind the rest of Europe in joining the CD ROM revolution and Vulcan are taking a risk

The PC market switched from floppy to CD ROM a few years ago in a move that was lead by the market publishers moved to CD first the public followed out of necessity This is the position that Vulcan want to promote in the Amiga market It is the general feeling in the Amiga market that if the Amiga is to survive as a viable software platform it must get a largint installed basin of CD-ROM users

Vulcan believe that the risk is one that must be taken They cite piracy and packaging costs as major reasons for going CD ROM only and point out that stockist particularly overseas are increasingly unwilling to carry games that arent on CD Another major reason for the change is that the software of today is just getting too large to fit on floppy disk Vulcan were originally planning a floppy disk version of their forthcoming Hell Pigs game but the realisation that this heavily cut down version would take 22 floppies must have had some impact on their decision especially as DD floppy disks are now considered non standard in the disk duplication business

The next year will be a critical one to the future of Vulcan and CU Amiga magazine wishes them the best of luck in this brave venture. Contact Vulcan Software on 01705 670269 Email Paul@vulsoft demon co uk

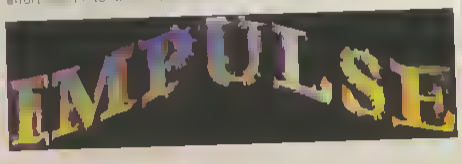
Imagine Sticks With Amiga!

Impulse the software house behind the enormously popular Imagine render package have promised that they will [illegible] version 6 after all One of many Amiga developers moving to the PC Impulse have been threatening to pull out of the Amiga market for some time now but have been reluctant to abandon their traditional home The significant decrease in sales of later versions of Imagine lead them to release version 5 to the Amiga community at the ridiculously low price of $100 US plus shipping in the hope of firing up some interest

The response to this last gasp effort [illegible] Impulse have sensed a [illegible] confidence in the Amiga market According to Impulse s Larry Halvorson Impulse is excited about the future and the rebirth of the Amiga

Imagine 6 will be published as part their Amiga Constant Upgrade Scheme (ACUS) where in the future instead of major updates every couple of years there will instead be a programme of continual upgrades for registered users Cost will be $100 for registered users of version 5

For more information phone Impulse in the USA on (+1) 612 4250557 or http //www coolfun com/amiga html



AUI RIP

We are sad to announce the closure of yet another Amiga magazine Amiga User International well respected for its highly technical coverage and independent stance has published its last issue All started in 1987 as a free insert in Commodore Computing International becoming a subscription only magazine under the name Commodore Business and Amiga User which soon turned into a full magazine available from newsagents

CU Amiga s ed tor Tony Horgan launched his Amiga career with AUI and fondly remembers mailing out some of the very first subscriptions by hand Antony Jacobson managing editor and publisher kept the magazine going despite the odds through some tough times but insufficient circulations and advertising revenues finally took their tolls

PSU Connectors For Tower Converters

Intrinsic Computer Systems can now supply thin non-standard Amiga power supply connectors making DIY PSU upgrades cheaper and easier than ever

ICS who are currently putting the finishing touches to a full tower kit (to be reviewed next issue with any luck) have put in an order for these rare parts which are due in stock by the time this magazine hits the shelves

We detailed how you can convert an off the peg PC power supply for Amiga use in the May 1997 issue complete with wiring diagrams The availability of the plug means this no longer necessary to cut up the existing A1200 PSU which would of course render it useless For the concluding part of out tower conversion series see page 30 of this issue in which we tackle the exciting options available to you once your Amiga is granted Zorro capability

ICS also supply a range of custom cables for tower conversion projects They can be contacted on 01474 533500

News in brief

Big Red Correction

In last month s issue we listed Corn Design and Dynabyte as publishers and Power Computing as suppliers of Big Red Adventure. Dynabyte are the developers, and Power Computing the publishers Corn published the PC version but had nothing to do with the Amiga release

For more information, contact Power Computing on 01234 851500

AAA Awards

The Amiga Computer Group in Sweden has announced an annual Award for Amiga Achievement. They hope that this will help to bring the Amiga community together. The first awards, decided by Jury, were given to David Hayne (International) and Thomas Svensson (Sweden) at the Amitech show in Stockholm over the 25-27th of April ACG are accepting nominations for next year's awards Point your browser at http://www amiga-cg se/aaa/

AHI Reaches 4

Martin Blom has announced the availability of version 4 of his AHI retargetable audio software AHI now supports Paula (the built in chip), Aura, Delfina DSP, Draco Motion for Draco systems, Prelude, Toccata and Wavetools AHI can handle 128 virtual sound channels in real time and can do non-real time 32-bit rendering with linear interpolation and mixing at up to 96khz AHI has a homepage at http //WWW lysator liu se/~leo/ahi html

Amiga Trainspotter

The winner of our Ultimate Amiga Trainspotter competition, as run in the January 1997 issue of CU Amiga, is Ben Hutchings of Oxford, who gets a load of exclusive Amiga kit as a prize We'll try to get a picture for next issue

Eyetech's Spring Specials: Full A1200 towers from £119.95; High speed A1200 serial port £49.95; Accelerators: '030/25MHz/FPU £79.95, 040/25MHz £189.95, '060/50MHz £439.95; Data/fax modems from £29.95; NEW - SX32Pro-33SE - £299.95; SX32Pro-50 £349.95; SX32MK2 £189.95; Enhanced PSU's from £39.95; 100MB bootable IDE Zip drives £119.95; CDPlus system from £139.95; Mousemat 99p

The Top-Rated Eyetech *CDPlus* for the A1200 2-speed and 8-speed CDROM drives

What do the reviewers say?

Amiga User International - 97%
" It all worked faultlessly "

Amiga Format - 96%
" An absolutely superb bit of kit. "

Amiga Shopper - 90%
" .. This is a quality product.. "

Amazing Value - Prices Down
8-speed - *only £189.95*
Special Purchase - Limited Availability

Upgradeable 2-speed - just £139 95

The *CDPlus* is also available as a full kit but without CD mechanism so you can fit your own for £119.95

The CDPlus MiniTower & Desktop cases

Considering a PowerStation?

The CDPlus is now available with an alternative 230W, CE-approved, PC MiniTower or Desktop case (which can also power your A1200) *for only £20 extra*

NEW! .. Or get a full A1200 Custom Tower* & fitting kit for your A1200-motherboard - with 250W PSU - *for only £99 95 extra*

SX32Mk2 & SX32Pro *Internal* Expansion for the CD32

The SX32 Pro is now shipping!
Make your CD32 into a high powered, portable Amiga!
The SX32Pro and SX32Mk2 add

- 33 / 50MHz 030 MMU CPU and FPU socket (Standard FPU socket only on the SX32Mk2)
- Simm socket for up to 64MB of 32 bit fast (60/70ns) RAM (up to 8MB fast 70ns RAM on the SX32Mk2)
- Buffered IDE interface for internal 2.5" hard drive and second hard drive. SyQuest, Jaz or even 2 speed CDROM (optional extra on the SX32 Mk2)
- Sockets for RGB video (23 pin) VGA video (15 pin) Parallel port (25 pin) Serial port (25 pin) Floppy disk port (33 pin)
- Jumper-selectable for PC or Amiga keyboard input (internal details on SX32Mk2)

To the CD32's existing mouse, joystick, keyboard audio, RF, composite video and SVHS ports.

What do the reviewers say?

Amiga User Intl "95% ...Highly Recommended"
Amiga Computing "90% ...A Dream to Use."
Blue Chip Award
Amiga Format "96% ...Absolutely Top Notch" **Gold Award**

The SX32Pro

SX32Mk2 - *sale price* - £189 95
SX32Pro-50 - *sale price* - £349 95
Genuine Amiga 68-key compact keyboard £34 95
SX32 fits any hard drives speed 1 16/8 RAM *Please ring*

All models include full internal fitting instructions, WB2.0 if applicable on SX and Workbench disk from installation module

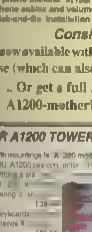
WOA Show Special **Limited Quantity - SX33Pro-33SE A Special Edition SX32 Pro with 33Mhz 030EC processor (no MMU) - *Just £299 95***

AMIGA HEALTH WARNING

If you have recently fitted an enhanced IDE ATAPI CDROM on an A1200 *(other than an Eyetech CDPlus unit)* without a buffered interface then you are at risk. There is damage arising in the future. The A1200 unlike A4000's and PC's has NO internal IDE buffering. On the A1200 the IDE interface connects *directly* to the A1200 processor. Unbuffered IDE interfaces can drive memory hard to IDE/ATAPI device (and only then in a short data burst) for a limited time period. To the best of our knowledge the *Eyetech CDPlus* is the only A1200 ATAPI CDROM upgrade with a buffered interface as standard. We are now making upgrade buffered interfaces available separately for use with other kits and DIY CDROM installations. Already £39 95 (inc small price for postage) for an Amiga health WB2 interface now available. *Compatible with all popular hard drives and accelerators - including 060 models*

FOR YOUR A1200 TOWER CONVERSION

Full tower case with mounting for A 1200 motherboard & PCMCIA accessories with 250W PSU, A1200 pass-thru connector, 5 x CD-ROM/Zip/floppy bays and ... for fitting a switch ... £116.88
PC A2 ... £ 89.95
modem ... extending 2 or ... £ 12.95
mouse/ ... £ 39.95
Full-size A4000 keyboard ... £ 89.95
Amiga ... etc. hands free ... £ 89.95
... 200 watt ... £ 69.95
drive ... with connections ... £44.95
interface ... £ 12.95
... drive in the all-new floppy ... £ 12.88
drive ... £12.88
External floppy drive 3.5in-3.5in ... £46.88
... 3.5in ... £46.88
... PC ... A1200 ... £ 12.95
... PC ... £ 12.95
... TV ... £8.95



If you have a tower drive this will fit your system!

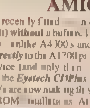
EYETECH's ONE-STOP INTERNET SHOP

Internet packs
1 month unlimited local call access Internet access, internet references book and tip (incl. authorised usage) internet software (TCP/IP WWW, FTP, Email Telnet, Term and IRC) £39.95
Upgrade to full unrestricted software any ISP. Full TCP/IP drives, IRC, FTP, Term, Mail, WWW browser with frames, Telnet, etc £44.95

modems
4 X modem @ psu £39.95
36 Brooklyn cables £99.95
36 X modem cables £89.95

Disks & phone cables
modem video (3m) £9.95
10m Amiga phone extn £12.95
1m modem lead RC232-4/9 to UK BT phone plug £8.95

Amiga Drivers for Epson Printers and Scanners



EnPrint for the Stylus Color/Ultra/Pro/ProXL/200/500/850/800/820/1500
Unbelievable photographic quality output
Preferences & stand-alone printing program

SceneQuick for all Epson scanners
24 bit scanning with full range of editing options
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Stand-alone task or integrates with your Art package. Photogenics, ImageFX, AdPro, XPaint, Pagestream 3, Wizard, ArtEffect, IPaint
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EnPrint v2 1 3 - only £29 95
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The Amazing Iomega *IDE Zip Drive*

Another first from Eyetech
Can be used in place of or as well as the internal hard drive
Use a different backup cartridge for each application or family member
Ideal for transferring multimedia data between Amiga and other platforms
File in any Amiga/Windows/Mac/Unix/Linux
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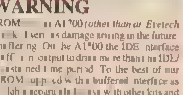
The ideal way to backup your data

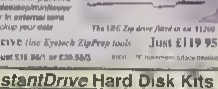


The IDE Zip drive fitted in an A1200

Bare IDE Zip drive *(inc Eyetech ZipProp tools)* **Just £119 95**
100MB Zip cartridge just £10 95/1 or £39.95/5 ... £ 10 95 ... Amiga ... £ 10 95

A1200 *InstantDrive* Hard Disk Kits

InstantDrives are only available from Eyetech



"The fastest drive I have tested on any platform 95%"
David Taylor Amiga Format February 1997

Important Note! 3.5 hard drives, even those described as 25mm, are usually 1/25mm high and will not fit in an A1200 without significant modifications to the case and metal shielding, which itself reduces the value of your computer. All InstantDrives have Eyetech drives less than 20mm high and fit perfectly

Rates 99% ! U November 1996 98% Amiga Format February 1997
No hole drilling case cleaning or shielding required
All drives are brand new with a 2 year warranty and come exclusive of full fitting kit and easy-to-follow detailed instructions
Ready-to-use with WB2 1 and over 40 Mb quality utilities installed and configured to the Timesaver menu system
All drives come with a fully licensed version of Celsius's MMe multimedia software software AMIGA is not access software (shareware if preferred)

2 1 GB AV £229 95 2 5 GB AV (~3Mb/s) - £239 95

0-1-Y and Bargain Corner

Hard-to-find parts for your Amiga project

Video cables
... £ 9.95
... £ 14.95
... £ 14.95
... £ 14.95
... £ 14.95
... £ 12.95
... £ 12.95
... £ 12.95
... £ 12.95
... £ 12.95
... £ 12.95

Video adaptors, modems and interfaces
... £ 39.95
... £ 39.95
... £ 39.95
... £ 39.95
... £ 39.95

3 & 5 video sound and adaptors
... £ 39.95
... £ 39.95
... £ 39.95
... £ 39.95
... £ 39.95

Reader Survey Results

You filled in the forms, we fed them into a big computer, and this is what came out of the other end.

Most copies of the January 1997 issue of CU Amiga Magazine came with a reader survey form tucked into the pages. To help us get a better picture of you, we asked you to fill it in and post it back to us. By way of an incentive, we also offered a Psion Sienna palmtop computer to one lucky respondent, picked at random from all the entries. That lucky reader was one M Bennets from Coventry. We'd like to thank everyone who took the time to put pen to paper. The information you've given us has been extremely interesting and useful. Right then, on with the results.

You, the CU Amiga readership

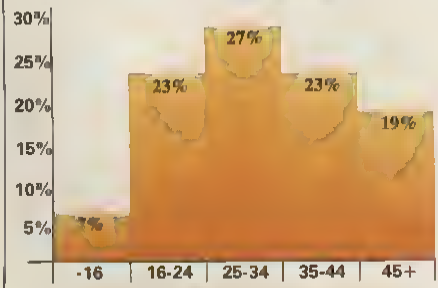
Let's start with a look at you, the reader. Many of those outside the Amiga scene have a preconception that our readers are all teenage boys. This myth is shattered by the responses that shows a typical CU Amiga reader could be aged just about anywhere from school kid to pensioner. There's virtually no peak in the age range at all. 92% of our readers are evenly spread from 16 to 46+.

As for sex, the results were not too surprising: 96% male, 3% female, and 1% apparently going through "one of those phases".

We asked how much time you spend on your Amiga each week. Responses for this were quite varied, ranging from 10% who are on their Amigas for 5 hours or less, ramping up smoothly through to 17% clocking up 21-30 hours, then back down a little for the 15% who spend more than 31 hours a week with their Amiga. The conclusion? Dis hards, no question about it!

How long have you been at it? 66% have been with the Amiga for 4 years or more. Half of those have enjoyed the Amiga for 8 years or more. Newcomers, Amiga owners for 2 years or less, make up 15%. The average length of Amiga ownership came in just under 5 years.

Age of CU Amiga readership



▲ Despite a slight peak in the 25-34 range, CU Amiga Magazine is read by adults of all ages, with a fairly small contingent of under 16s

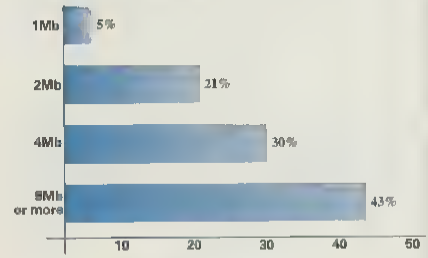
Your Amiga

So enough about you, what about your Amigas? A stonking 80% of you are A1200 owners. The good old 1.3 A500 was the next most popular machine with 15% of the vote. Almost level pegging were the CD32, A500 Plus and A600 with 12%, 11% and 10% respectively, while the 'big box' Amigas only scraped together 8% when combined. Mathematicians will notice that these scores add up to 136, making an average of 1.36 Amigas owned by the typical respondent. Alternatively, 35% of you own a second Amiga (assuming no-one has more than 2, which is probably not true).

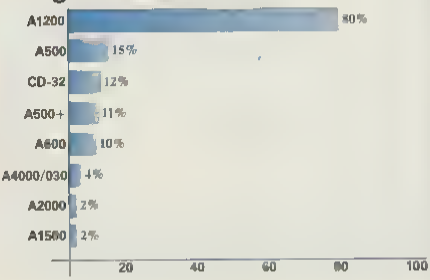
Another popular misconception is that there are loads of Amiga owners running on 1 or 2Mb systems. When quizzed about RAM capacity, a heartening 43% reported 8Mb or more, while 30% ticked the 4Mb box. This should have been marked 4Mb or more, and we'll assume it was, which would make 6Mb a probable popular RAM size. 21% are still getting by on 2Mb, with the 1Mb brigade bring up the rear with 5%.

Next we wanted to know what peripherals your Amiga is blessed with. Once again we were pleased to see 91% of you have hard drives. 85% have a printer, 57% have a monitor, 51% have a CD-ROM drive and 48% have an accelerator. The next most significant add-on was a sound sampler coming in at 27%.

Total RAM capacity



Amiga models owned



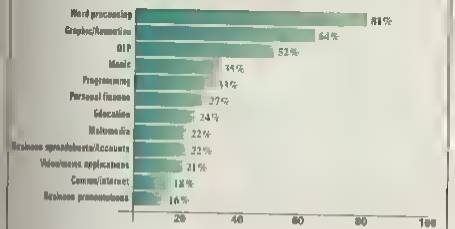
Amiga usage

So what exactly do you do with your Amiga? Almost everyone owned up to a bit of word processing 91% of you in fact The ever popular graphics/animation area scored a slightly lower than expected 64% not as high as might be expected considering the sampled issue had Imagine 4.0 as the main cover mount. Next, DTP pulled in a respectable 52% score Music and programming were next up, with 35% and 33% respectively Another significant area was that of office' type applications such as spreadsheets personal finances and business presentations Multimedia scored 22% and video got 21% which II lumped into one category would rate as one of the most popular uses, although many respondants may have ticked both boxes.

There was a separate question to ascertain game playing habits It seems most readers are occasional gamers to various degrees with half reporting that games account far between 25% and 75% of their Amiga time Non gamers get a bit lost in the 0-25% category, so that s not told us much but we do know that only 6% see games as the major use for their Amiga

As for the types of games that are most popular adventures top the chart with shoot 'em ups_puzzlers and racing games all level pegging in second place, closely followed by RPGs Less popular were platform sport arcade conversions (when was the last time we saw one of those?) and beat 'em up genres

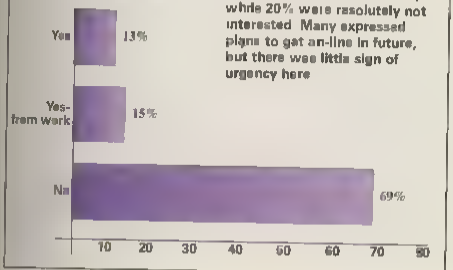
'Serious' applications



Net surfers?

To get an idea of how many readers are connected to the Internet, we asked them (cunning plan eh?) The response came back as 13% with access from home and a further 15% who surf from work 69% noted no Internet access However it's our opinion that many dedicated net users would be unlikely to fill in a large questionnaire such as this and send it by snail mail', so the actual figure of netted up readers may well be higher When asked "if not why not?", 85% cited either the cost of access or the expense of getting up and running with an Internet system and account.

Internet access



21% were unsure what benefits the Internet could offer them, while 20% were resolutely not interested Many expressed plans to get on-line in future, but there was little sign of urgency here

What about us?

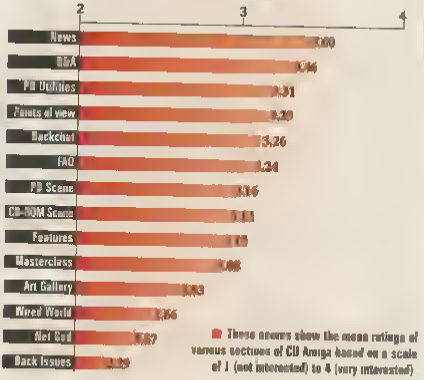
It was interesting to see how many bought that particular magazine on the strength of the cover, software or reputation alone 56% of those who bought CU Amiga 'over the counter' didn't feel the need to look through the magazine at all before parting with the cash However of those who did went to survey the goods first, 70% looked at the contents page before buying while the news features and 'technical' reviews were also well thumbed in the newsagents

We also asked you to rate four aspects of CU Amiga as excellent very good, good fair or poor 'General quality of writing' was rated as either excellent or very good by 74% Similar scores were registered for 'General quality of pictures', 'General look of magazine pages' and 'Style of front cover' A bit of cross referencing shows that most of the more enthusiastic marks in this section came from younger readers

When asked to rate individual sections and articles in the magazine, those sections that applied to all readers were rated highest, as expected (see chart below) Specialcelly news and Q&A were of great interest to many but the biggest crowd puller was the Imagine 4.0 feature (oh, and the program itself no doubt), left off the chart for the sake of clarity Opinion of the rest of the contents varied depending on the particular interests of each reader

To sum up your opinion of CU Amiga we asked for three words which best describe the magazine to be picked from a list of 24 that included a range of positive and negative attributes Way out in front were the top three of 'informative', 'friendly and 'interesting' each scoring between 72% and 78% At the bottom end of the scale were 'biased' confusing and 'juvenile', which we were glad only managed around 3-4% each

Rating of magazine sections



These scores show the mean ratings of various sections of CU Amiga based on a scale of 1 (not interested) to 4 (very interested)

And finally...

The survey also revealed a number of other factual nuggets of rather less relevance For example, 3% said they would like to see more coverage of food in CU Amiga, 20% are interested in animals, 23% wear Levi jeans, and the average weekly lager consumption is 4.36 pints

What this survey shows is that there really isn t such a thing as a typical CU Amiga reader, something we have been aware of for some time The only generalisations that could be made would be that most CU Amiga readers are male own an Amiga and use their Amiga for word processing However, we've learned a great deal from your responses and all the information we've gathered will help us fine tune your favourite Amiga further still Thanks

The Amiga CD-R Evolution

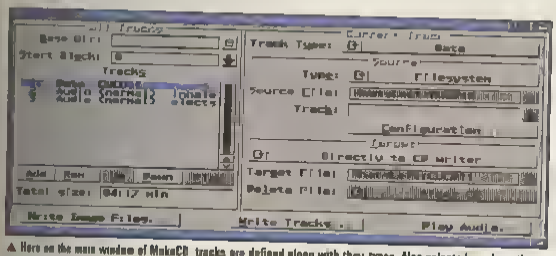
Ever thought of starting up your own CD company? It's not as difficult as it might appaar. It's also faasibla to go into commercial CD mastering from your own home and, more importantly, from your own Amiga.

It seems like yesterday that CD [illegible] was a big thing. I remember [illegible] excited about the CD [illegible] and splashed out an awful [illegible] money for a CD player and [illegible] Dire Straits Brothers in [illegible] days a computer is hardly [illegible] but the 8 speed CD ROM [illegible] juggernaut comes with [illegible] taped to the [illegible] that has so long been [illegible] you had to buy rather than record yourself that the fact you can roll your own has taken some getting used to. It was always too expensive anyway until now.

Only last year a CD Recordable or CD R deck cost over £500 and blank CDs were £10 each. On the Amiga things were even more ropey with AsimWare's expensive MasterISO as the only software option (incomplete with its support for a limited number of CD R drives. Lately things have rapidly [illegible] price of CD R decks [illegible] excellent new Amiga software [illegible] blank media also falling. Previously [illegible] DS was thought to be a sp[illegible] This is a myth we'll seek to [illegible] we point out the advantages [illegible] R and how to do it on the Amiga.

Why CD-R?

Is it worthwhile spending this much money on a CD cutter? It depends on the applications of course. At the minimum CD R is definitely the cheapest random access storage around. That means it's cheaper than Zip disks, floppies and of course hard drives. Tape backup can be cheaper but the data can only be read off sequentially and of course it's only good on tape drives not CD ROM mechanisms – more common than Del Boy's accent. OK so it's cheap massive storage but it has



▲ Here on the main window of MakeCD tracks are defined along with their types. Also selected is where the tracks are to go: to temporary files or directly to the CD writer.

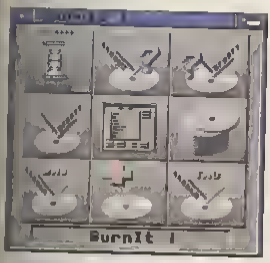
some drawbacks. It can only be written once and writing CD Rs is time critical.

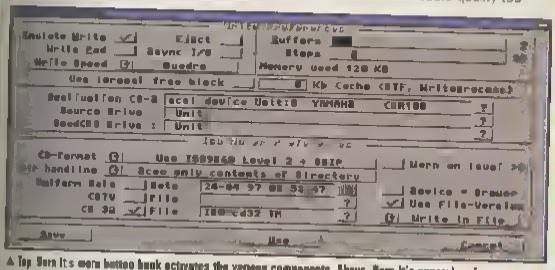
The obvious application for CD-R is the backup, but in reality Amigans rarely have need of such a device purely for backups. Most likely you'd be using a CD-R for something else and backing up is just another useful application of a CD-R drive connected to an Amiga. So the major use is going to be actually making CDs for other people. They may contain data, music or a mixture of both. CDs can be read by virtually any machine so right from your Amiga you could make a commercial CD-ROM for use on a Mac, PC, Amiga or all three, which has indeed been done before. Doing that obviously increasing your potential market too.

Comprising freely redistributable software and presaving a CD full of this could then be passed to commercial duplicators. They would then make a Glass Master (costing around £400) and be able to press silver CDs from there at a cost of around 30 pence each (depending on quantity). Feel free to do the maths and figure out if it's time to start up that CD company. There's good merit to this idea, exactly what you may put on a CD is up to you but it's easily feasible to go into commercial CD mastering from your own home and more importantly, your Amiga.

Making music

The next application must be music. The Amiga's audio is sadly inferior to CD-quality 44Khz 16-bit audio and you can't fit an Amiga in your back pocket or mail it to a record producer. Armed with a copy of OctaMED SoundStudio from the March issue of CU Amiga, an Amiga can generate the highest quality music straight to hard drive. That can be directly cut onto CD to use as a demo, commercial record master or even your own personal listening. Copying tracks off other CDs onto a new CD-R is easily done. If you want proof of this in action, have a listen to the two audio tracks on this month's cover CD. Both were produced using Amigas and mastered onto a CD-R with an Amiga. You can have that kind of audio quality too.





▲ Top: Burn It's main button bank activates the various components. Above: Burn It's general preferences opening an impressive array of settings for the CD-R writer and the type of ISO volume created.

Cutting CDs

The business of using CD-R cutters on Amigas isn't held in tactfully many ways it's superior to doing it on a PC with their painful multitasking and hideously expensive software. However it's not a trivial undertaking and requires some understanding of what's involved and a base level of performance to ensure reliability. Firstly IDE CD-R decks are only just appearing and as yet they are totally untested on Amigas. For the moment you will require a SCSI interface to use a CD-R. It's likely that a SCSI interface will always be the best way of using a CD-R at any rate since the A600/1200/4000's IDE interface isn't fantastic anyway.

The critical factor on driving a CD-R recorder is that they must be fed data at their recording rate with no significant interruptions in the flow. That means the writing process must constantly be supplied with data from the part of the system that's reading the source from the hard drive. It also means you can't multitask your Amiga to your liking since this may take away valuable CPU resources from the CD writing process and the

ISO 9660 options

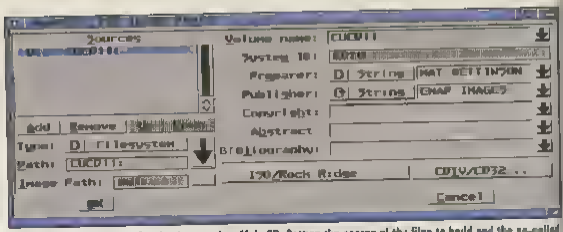
It's generally known that ISO 9660 is the standard for CDs but what kind of standard is it? It's a filing system just like OFS and FFS are on the Amiga. The standard isn't anywhere near as complex as the Amiga's filing system – standard ISO 9660 level I only handles PC style 8.3 filenames. Not much use. Fortunately, ISO 9660 level II supports 31 characters but they can only be uppercase alpha numeric or an underscore. Not much of an improvement.

So there's the RockRidge extensions which give full files with all possible ASCII characters inside. Great news but sadly the original Commodore CDFS doesn't support this so we must use the ISO 9660 standard and break the 'rules' to include full Amiga filenames. It's a shame that as many Amiga users still use the ancient buggy Commodore CDFS as it imposes certain restrictions like not being able to record special Amiga attributes in RockRidge and so on. When we mastered CUCD10 with RochRidge, one aspect of this broke the Commodore CD filing system and so we needed to mail out hundreds of CDs using the old format. Isn't it time that you updated to AmiCDFS? You can find a full installer on this month's CD-ROM.

dreaded buffer underrun [illegible] will render the CD R disc useless for that track and so is a waste of a fiver of the current cost of CD R media. Ouch.

DMA SCSI

Fortunately CD R drives have test modes for just such for making sure you have the connections set up tweaked right so that everything runs smoothly without a hitch – once the cutting process is turned on the point of no return has been reached. Firstly a stock A1200 with an internal hard drive and a Squirrel interface is unlikely to have the necessary throughput to drive a CD R. The Squirrel itself consumes a good deal of CPU horsepower during SCSI activity as it is but when the IDE controller itself is to do the same we're asking for trouble. A DMA SCSI controller attached to a CPU accelerator will be just the trick providing extra CPU power and fast SCSI to take care of the writer.



▲ The source preference for the data track in MakeCD. Setting the source of the files to build and the so-called 'Primary Volume Descriptor' where things like the preparer and publisher and the volume name are set.

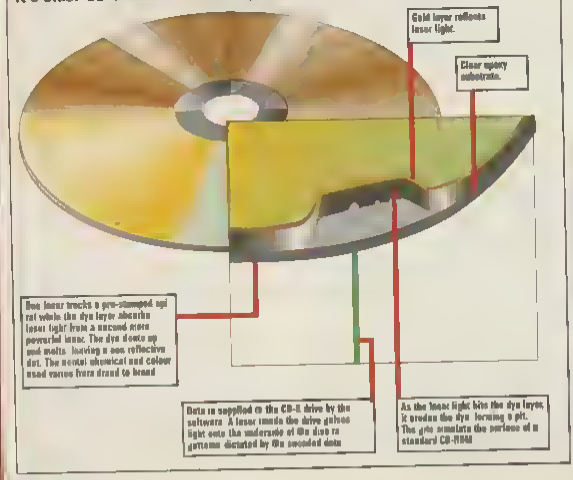
On a big-box Amiga things may be less critical. In this case reading from an IDE drive and writing to a SCSI CD R via a Zorro 2 controller such as an Octagon even though it is not DMA is most likely to succeed. Obviously the performance of your system needs to be doubled if you're splashing out on a flash 4 speed cutter. The big mistake people make is doing raw speed tests from their controllers. You might get a figure of 2Mb/s off a hard drive and the maths say a 2 speed cutter requires only 300K/s to succeed. It's not that simple. It's about interruptions and not about raw speed.

CD-R and how it works

The basic principal of CD-R is as follows. – A blank CD-R disc has a spiral pre-stamped into the media. When writing, an initial laser tracks this groove so that the laser behind it can write the data. This is rather critical, to say the least, which is why the faster cutter you can get for less than the price of a new house, writes at only 4 speed. Most write at 2.

The data is written by the second, larger laser switching on and off to write the pits and dots. The entire CD-R disc is coated in a chemical which changes its reflectivity after being heated by the laser. There are several chemical formulations used in CD-R disks which are most noticeable by the colour. Some are a pure gold giving rise to the nickname for CD-R disks as 'gold disks'. Others are green or even blue. They function in the same way though some work better than others in certain brands. In the same way though some work better than others in certain brands of CD-R writer. We found a couple of brands which cut OK but virtually every CD-ROM drive had trouble in reading.

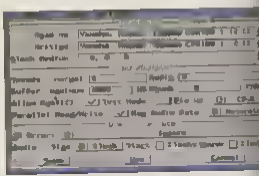
This is another important issue, all CD-ROM drives should be able to read any kind of CD-R disk but in reality this doesn't work out so neatly. Our advice is to stick with a reputable brand of CD-R media, safe in the knowledge that it works. Don't be surprised if Dad's CD player wont play audio from a CD-R – this is the most popular area of failure. Generally it's older CD drives which have problems with CD-R disks.



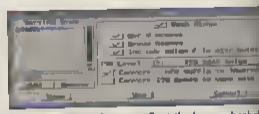
CD-R models

A top little CD R which we can recommend is the Rcoh RS 1420. We recommend it for three reasons. Firstly it's a good lovely big 2Mb buffer which makes things less critical. 2Mb is over 6 seconds of CD writing so an interruption would have to be quite serious before it affected it. Secondly MakeCD supports the drive directly and it's known to work perfectly with it. More about software later. Thirdly the drive is extremely good value for money at £276 from Linefeed (tel 0171 474 1765) and it's even available in an Amiga friendly external powered box for £350. It's by no means the best writer on the market but it's the right price and the healthy buffer makes it ideal.

The absolute best drives on the market by near universal agreement are Yamaha's range of 4 speed writers. These are known to have the fewest bugs in the firmware of all CD writers. Yes unfortunately the standards are so complex that it's quite



▲ MakeCD's settings for the SCSI CD R writer.



▲ ISO volume preferences. Spot the box unchecked which broke CUCD1B on the Commodore CD filesystem.

[illegible] looking to [illegible] to write as opposed [illegible] 2 speed unit. They do [illegible] plus a higher speed so [illegible] system performance. I recommend this only for those with [illegible] Amiga hardware and fast SCSI

The software

MasterISO This [illegible] grandaddy of commercial CD writing software from Canadian CD specialists AsimWare authors of the excellent AsimCDFS CD filing system. It's simple and a little expensive for amateur use but it's extremely reliable and is the most efficient CD cutting software available. There's virtually no ISO volume options to be used so it's geared specifically towards creating Amiga CD ROMs. It doesn't directly support a range of CD R decks but just known to work with [illegible] such as the industry standard HP [illegible] CD2000. The Yamaha [illegible] is simple of other [illegible] and has none of the bells and whistles that MakeCD does. It does exactly what it says on the tin 100% reliably which is why it's been used by us to make CDs since CUCD2. MasterISO 2.0 is firmly in the development works promised for some time next month. We'll take another look at it then.

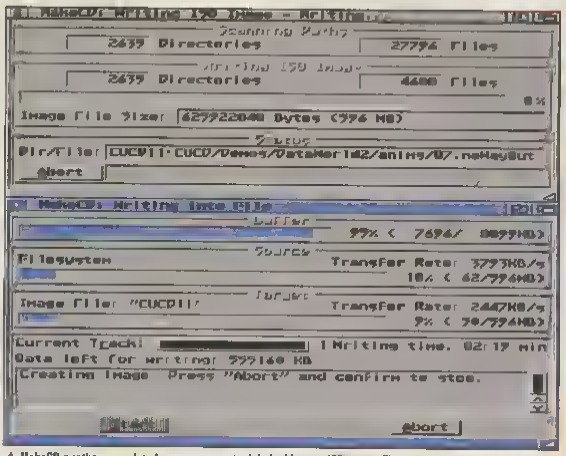
Burn It A newcomer like MakeCD. Burn It is written by German programmers Michael Siegel and Axel Dersing. Burn It's main claim to fame is that it handles DSP Al-Once (DAO) recording. This enables creating CDs without 2 second gaps between tracks just like your sometimes find on commercial audio CDs. It's also very useful for creating disks for commercial duplication. Burn It's an extremely well featured CD writing package and we'll be taking a close look at it in the next issue of CU Amiga. Loaded with not only write capability but extensive reading functions the documentation doesn't shy from mentioning the naughty practice of backing up Playstation CDs. This package is certainly one to look out for if only for the DAO capability alone which is yet to be implemented on any other Amiga CD writing package. There's a no write demo of Burn It on the CD but the full version is not cheap at £79 for the Track At Once and £119 for the Disk At Once versions.

Make CD The CD writing package which every thing else is going to be measured against given the current state of the package, awarded 92% in this issue. MakeCD has lots of options to alter the ISO image and it's also the only package which doesn't require generating of a temporary ISO file before cutting. This saves on time and hard drive space if your Amiga's quick enough to keep up with it. It can read and write multisess on and Mode2 XA disks just like Burn It and is promising DAO capability soon. A superb package which all around £35 for amateur users a total steal. Check out the review on page 63 and the demo on the cover CD ROM before you go any further.

There you have it. Top quality CD R decks have come right down in price to an affordable level and the Amiga software is looking absolutely superb with even more in store for us later. With all this power now within your reach, it might be worth considering your very own CD R after all whether you want to make a few backups, set up shop as a software house or even start your own record label.

For more information see this month's CD ROM web section for just about everything you need to know about the CD ROM standard.

Mat Bettinson

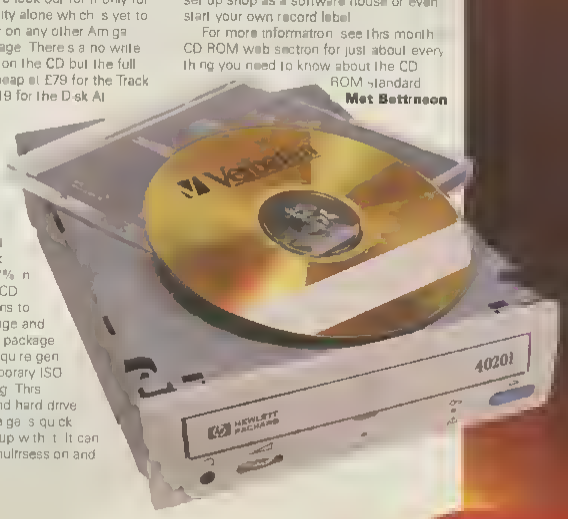


▲ MakeCD's rather convoluted progress report while building an ISO image. The top window shows the file being placed in the volume, the lower shows the buffer progress and transfer rate statistics. Hee hee

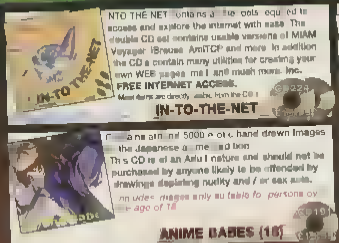
Multisession

While you can only write to a CD-R once, it's not true that you can't record any more on it after that. We can use the so-called multisession capabilities of CD-R recorders. The first and most common application of this is PhotoCDs. Where a roll of film is taken in with a CD-R disk, the developers scan the photos and place them in a session on the CD-R. This can be repeated until the CD-R is full. We can do this with data tracks also although only the AsimCDFS, CacheCDFS and AmiCDFS filing systems will mount the various multisession volumes.

You will also need a CD-ROM drive that is multisession compatible or you will need to use the CD-R deck to read them. MakeCD and Burn It have multisession support. Using them in this way increases the usefulness of CD-R recorders. You don't need to wait until you have a full CD worth of data before cutting a CD.



EPIC CD-ROMS
The Best just got Better



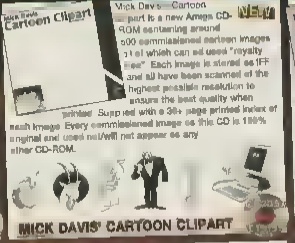
INTO THE NET contains all the tools required to access and explore the internet with ease. The double CD set contains usable versions of MIAM Voyager, Netscape, AmiTCP and more. In addition the CD contains many utilities for creating your own WEB pages and anti mash mows. Inc. FREE INTERNET ACCESS.

Most items are directly usable from the CD!

IN-TO-THE-NET (CD224)

Contains an amount of 5000 or so hand drawn images of the Japanese anime and boo. This CD is of an Adult nature and should not be purchased by anyone likely to be offended by drawings depicting nudity and / or sex acts. Images only suitable for persons over the age of 18.

ANIME BABES (18) (CD150)



Nick Davis Cartoon Clipart

Nick Davis' Cartoon Clipart is a new Amiga CD-ROM containing around 500 commissioned cartoon images 51 of which can all open "royalty free". Each image is stored as IFF and all have been scanned at the highest possible resolution to ensure the best quality when printed. Supplied with a 36+ page printed index of each image. Every commissioned image on this CD is 100% original and does not/will not appear on any other CD-ROM.

NEW!

NICK DAVIS' CARTOON CLIPART

The new Magic Workbench CD contains the largest collection of Magic Workbench icons, Backdrops and tools ever compiled. Includes well over 5,000 Magic WB icons. Over 600 specially selected Magic Workbench backdrops in 8, 16 and 256 colours, over 30megabytes of Workbench tools, gadgets, patches and desktop enhancer tools/utilities. The CD also includes Magic Workbench itself as many other items never before released on any Amiga CD ROM. If you want to update/enhance your existing Workbench 2 or 3 then this is the perfect Workbench add-on CD ROM. This CD is only suitable for any Kickstart2/3 based Amiga such as the A500+, A600, A1200 and A4000.

MAGIC WORKBENCH ENHANCER V2

SEXY ROMS
THE HOTTEST AROUND

Adult Sensation is possibly the Amiga's largest selling adult title. It features over 4,000 high quality 256 colour images of the "adult" nature. Image viewers and convertors are included for any Amiga. (OVER 18 ONLY)

(CD201) £19.99

Adult Sensation 5 not only contains 4,000 new colour images but also includes tons of adult related samples, adult music modules, tonnes of adult stories, hundreds of 70's photos, adult games and more. (OVER 18)

Reduced! (CD115a) £7.99 with any other Adult CD

Sexy sensation this CD contains around 2,000 specially chosen high quality BMP & GIF images. Viewers & graphic convertors are included for easy and quick access to any of the pictures on any Amiga. (OVER 18)

(CD106) £19.99

Adult Sensation 3D actually contains over 4,000 true 3D mensional sex images. 3D viewing software and top quality 3D glasses are also supplied. Available only (OVER 18)

Rated 90% (CD114b) £19.99

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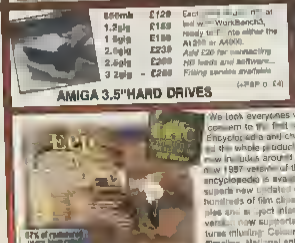
(CD164) £19.99



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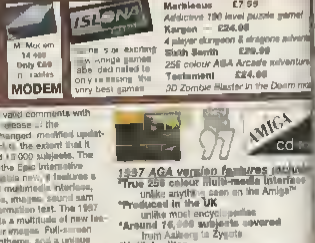

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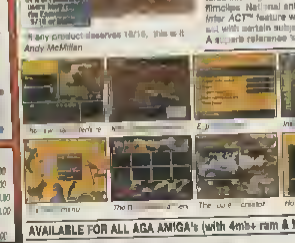

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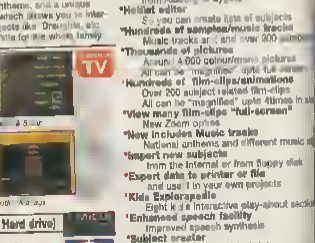

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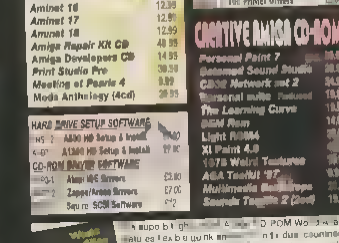

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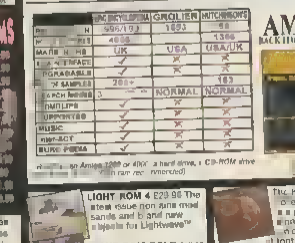

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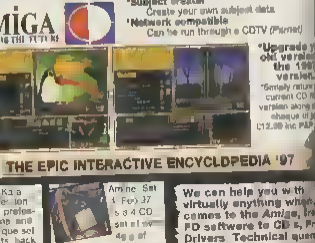

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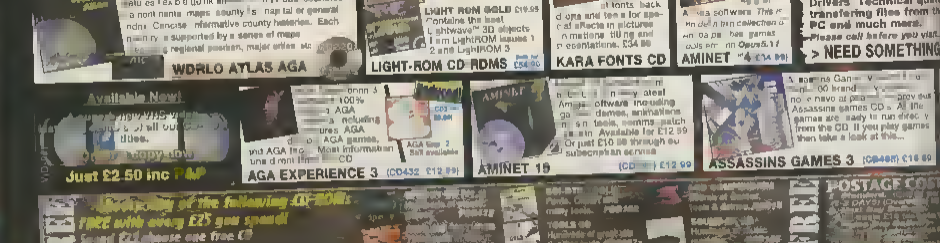

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Build Your Own Tower

PART 3

As our DIY guide to tower conversion draws to an end, we present you to the wonders of Zorro cards and introduce the easy option of commercial towers.

Welcome to the third and final part of our epic Build Your Own Tower feature. It has been a long road with more than a few pitfalls, but it is something that had to be done. Now that the Amiga finally has a home, the prospect of the technology being brought into the modern era looks good but until such a time as Gateway/Amiga International have a new upgraded, mid market desktop machine for us all to rush out and spend our hard earned readies on the only true path to Amiga nirvana is the way of the tower conversion.

Over the past two issues, we have covered the most basic but most universally useful advantages of tower systems. If you follow the guidelines for either the simple tower sidecar or the full tower conversion, then you will have a freedom of expansion that is simply not available to the Amiga user stuck with their 80's style keyboard console machines. The high capacity power supply means you never have to worry about the problems of using an accelerator and a hard drive – gasp of breath – *at the same time*. 44 pin to 40 pin converters on the IDE port enable the use of easily available hard drives, CD ROMs, even Zip drives, all to be found at knock down prices from the cut throat PC market. But there is more. This month we look at the ultimate expansion on for your Amiga: Zorro slots.

Busboards

Traditionally Zorro slots have been the preserve of the big box Amiga. Many Amiga users have only a vague notion of what they are about and why they might want them, but little known to most A1200 owners, there is already something not far off being a Zorro slot in your computer – the drive expansion slot. German hardware manufacturer Micronik have for a little while now produced a Zorro busboard for the A1200 which plugs into the accelerator slot, to allow you to use Zorro cards. These devices of course require a tower case to use.

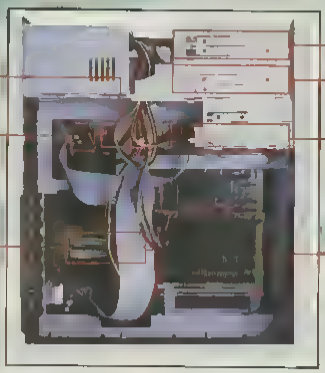
The Micronik busboard, distributed in this country by Blittersoft, currently costs £190. This is a fair wheck of money, but is good value for what it does. We looked into the possibility of a DIY busboard, but it simply isn't practical. Not only would it be very hard to build, but the savings would be minimal. The Micronik board can be fitted to a DIY tower, but picking up the matching Micronik tower from Blittersoft makes life a lot easier.

A busboard and tower package costs £369.95. For this you get the tower case, an uprated power supply, a PCMCIA right angle converter, keyboard adapter, all the cabling necessary, including 44 to 40 pin IDE [illegible] and of course the busboard with four Zorro slots, two ISA slots, two PCI slots and a video slot.

Amiga dedication

The Micronik tower case differs from many tower cases you might look at for DIY options in that it is designed with the Amiga motherboard in mind. When we dealt with DIY options last month, we showed you how to use ribbon connectors to extend the ports to the front of the tower. A cheaper option would be to make a cutout in the back of the case which the motherboard sockets will pass through. Doing this with a hacksaw is a tricky task

Micronik tower case internal set-up



Waiting for a busboard

What is a busboard anyway? A busboard adds data buses to your computer. These are communication links between your computer's CPU and a piece of add on hardware. Although there are a variety of dedicated buses on the A1200 already, several of which have been sneakily used by hardware developers for their add-ons, the standard Amiga bus for add on cards is the Zorro slot. Big box Amigas come with a Zorro busboard, the low end models don't. Most major types of hardware expansion – graphics cards, sound cards and so on – need a fast connection such as the Zorro bus, and at the moment at least. If you want to expand your A1200 in this manner this is the only option. Turn the page to see what Zorro cards can offer you.

If this commercially produced tower does it for you. Inserting the motherboard into this tower is made simple by the ingenious cradle system Micronik have developed. A drawer slides out of the tower completely to accept the bare motherboard.

Preparing your motherboard for transplant involves a little more than we described last month for the DIY fitting. Because of the shape and size of this cradle the motherboard has to be removed entirely from the metal shield which protects it inside the plastic A1200 case. Not hard, too, but time consuming and fiddly. You look at the back of your computer and see that there are small hexposts [illegible] the side of all the sockets. These [illegible] screw through the metal shield [illegible] be unscrewed for the bottom [illegible] removed. The bare motherboard [illegible] into the plastic cradle, the [illegible] matching with the cutouts. We [illegible] the registration of the holes [illegible] correct and you can save yourself a [illegible] hassle by putting the hexposts back when the motherboard is in the cradle.

Keyboard adapter

[illegible] the cradle is a keyboard adapter which is the easiest to use of any we have come across. A ribbon connector plugs directly to the keyboard ribbon header of the motherboard – two seconds to fit. The adapter takes PC keyboards, a cheaper and better option than the alternative of spending silly money on a case to [illegible] your Amiga keyboard. The motherboard is then screwed down to the cradle but be careful as the screws bite into the unfortunately rather soft plastic the case is made from and can easily tear it.

If you are fitting the busboard, it is best [illegible] at this point. A passthrough connector plugs into the back of the busboard and slots onto the accelerator slot on the motherboard. The cradle has support posts which match to screw holes on the busboard, keeping it in place. Connecting the video adapter is the only tricky part of the operation. The adapter has three chip sockets which press down inverted onto three of the chips on the motherboard and there is a single trailing wire that must be soldered to the leg of a chip. The connector then plugs into the busboard.

Once this is done, the cradle is ready to be slotted into the case. The side panel can be removed and the cradle screwed to a bracing strut to lock it in place. With the other side panel removed, the motherboard can be accessed.

A rather major design oversight means that at this stage you run into problems. The passthrough connector adds a little to the overall height of the motherboard, and with it fitted there is no room in the case for an accelerator. The modular design of the case allows an extra bay to be snapped onto the top of the case, these bays costing another £30. Getting one of these is a necessity if you want the busboard.

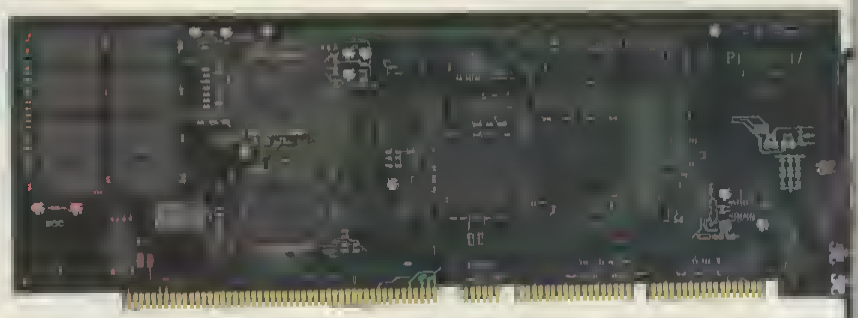
Your floppy drive should be extracted exactly as described last month, with the mounting bracket removed. It slides easily into the floppy drive bracket of the case and is connected via the long cable supplied to your motherboard. The face plate of the tower has built in blanking plates for internal floppies. An IDE connector plugs straight into your motherboard and gives you provis on for a pair of 40 pin devices.

A cable connecting the LEDs at the front of the case plugs into the mother board, and the power connectors from the PSU are connected to your drives in the normal manner.

To finally tice things up, a single sight way power connector dangles from the power supply – this is connected to a header on the busboard. You can now plug in any Zorro cards, close up the case and you are ready to go with your new super Amiga.

▼ This exploded view shows how easy the tower is to assemble

Continued overleaf ▶▶▶



▶The best Zorro card yet? Read all about it on page 58.

The mark of Zorro

The Zorro slot has been around for some time, since the very first Amiga 1000 in fact. The interface standard only turned into a physical slot with the A2000 and it was then known as Zorro II.

A Zorro port is a 100 pin slot in a straight line which allows for full auto configuration of inserted cards. This means that any ROM and RAM on board the card is automatically mapped into the Amiga's memory space. Yes, the Amiga did this right back in the 80s, where as it became a revolutionary feature on the PC in only 1995 (and it still doesn't work properly).

Just about any kind of peripheral imaginable can be added to the Amiga via a Zorro slot. For over 10 years third party manufacturers have been creating all manner of add ons for big box Amigas. Whether you've got a real big box Amiga or whether your Amiga has been newly converted to a tower, the addition of Zorro cards can give your Amiga new life. Here we'll look at some of the common cards in each area.

SCSI cards

The first Zorro card ever made was the A2090 XT MFM hard drive interface. We actually have one of these museum pieces in the office. It lived at the heart of the A2000HD machine, complete with a monster 20Mb MFM hard drive bolted onto the card. It was improved to include a proper SCSI interface with the 2091. Some of these cards are still in use today although they're only useful with late revision ROMs on-board.

There's been a lot of SCSI cards on the Amiga and one that's stood the test of time well is the GVP HC-8 SCSI card. It also has facility to add memory but requires the slow 16-bit variety. The controller performance is acceptable and the software is also reasonable. It sells for £99.95 from Power Computing. You can buy a third party ROM upgrade for the GVP called Guru ROM. This is far better driver software which makes the card faster, uses less CPU time and supports a greater variety of SCSI devices. It's not a cheap add on at £49.95 though.

Probably the best current SCSI card is the Octagon SCSI card from Bsc. It has the same design as the GVP card with sockets for 8Mb of 16-bit memory and an external 25-pin D SCSI 1 style connector, though it supports SCSI 2 commands. The software is far better as standard than the GVP HC-8 and performance is mildly better though not up to that of the HC-8 and Guru ROM combination. It's a high quality card which has proven to work well with a variety of hard drives, CD ROMs and the Zip drive. It doesn't work with the SyQuest EZ135 though. The Octagon costs £99 and comes from Golden Image.

Rare as hen's teeth are the Porches of Amiga SCSI cards: the DKB 4091 and Z3 Fastlane. These are Zorro III cards which support full 32 bit Direct Memory Access or DMA for short. That means they use very little CPU time when transferring data. They're also much faster and support the SCSI 2 Fast protocol for even higher speed. Unfortunately these cards were very expensive and we are not aware of any dealers stocking them any more.

I/O cards

Not enough ports. What you need is an I/O (in/out) extender card in a Zorro slot. These can give you high speed serial ports which are much better than the Amiga's aging internal unit. They can also add Parallel ports for use with networking or driving a printer while your internal port connects to a sampler or some other device.

There's a few around but the most common units are the GVP IO Extender which provides two high speed serial ports and a parallel port and the BSC Multiface III identical specification. The GVP Extender sells for £69.95 from Power Computing while the Multiface III rocks in at £79 from Golden Image. The balance must go to the Multiface III since Parnet and MagPLIP (TCP/IP driver) drivers are available for it and it doesn't need another add on panel with the extra serial port like the GVP.

For those with a real need for lots of serial ports, Golden Image have a card known as the Spider which sports eight serial ports capable of 57 600 baud each, ideal for a multiline BBS sysop, but it'll set you back a cool £299.

Ethernet cards

If you want to network and network properly, you can't beat Ethernet. It's designed to be extremely fast (around 1Mb/s), can handle very long cables and a lot of machines simultaneously. Once an Ethernet card is slotted in it will possess a so-called SANA-II device driver which something like Miami or AmTCP can use. Uses range from file sharing to getting your Amiga on an office/university Internet.

PCI Slots – What's it all about?

You may have heard some talk about PCI slots. PCI is an interface standard like Zorro III. While commonly found on PCs, they are not limited to that platform. However because the PC market uses this standard, there's a wealth of high performance PCI cards available. If the Amiga grows PCI slot compatibility, we could use these powerful cards too. Some PCI cards that it would be highly desirable to run might be, Adaptec's SCSI Ultra cards, Matrox's fast graphics cards, Ethernet cards and even the 3DFX 'Voodoo' 3D hardware. The best news is that all of them cost lots less than Zorro cards. The bad news is that we're yet to see a 100% working PCI slot on an Amiga expansion. The Picasso IV apparently has a PCI compatible slot, though some form of physical adapter would be needed. Software drivers would also need to be written for any supported cards. The Micronik Zorro busboard looked at here has 2 PCI slots but it requires a PC-on-a-card to be plugged in to make use of them. Darn.

connectio [illegible] ch like we do at CU Amiga

There s two current cards which are available The Hydra Systems Amiganet card sports both Coaxial and 10-base-T telephone cable connections and costs £149 from Hydra direct There s also the Village ton c Ariadne Ethernet card of identical specification except it also has an extra parallel port It costs £149 95 and is available from Blittersoft

Sound cards

The [illegible] range of 16 bit sound [illegible] the Amiga although [illegible] to be let down by soft [illegible] Toccata s better [illegible] it comes with sampling [illegible] RAM and hard [illegible] play full CD quality [illegible] s well supported [illegible] system The [illegible] as found on the March issue [illegible] CU Amiga supports the Toccata directly Good news but we had trouble finding a distributor for it in the UK Macrosystem s telephone number in Germany is +49-2302-849490

Upmarket and showing buckets of promise is Petsoff s Delfina DSP card More than just a sound card The unit comes equipped with a 40Mhz Digital Signal Processor capable of performing all kinds of operations on audio in real time Apparently the authors are working on an MPEG audio layer 3 player for the DSP which would take the load off the CPU and provide perfect 16 bit playback Naturally it samples also and s provided with a software control panel to switch audio inputs from mic/line levels and so forth The supplied effects program is fun to play with It also has an AHI driver and Octamed SoundStudio supports it directly again However we found the DSP had a tendency to crash for no reason Again there s no UK distributor Priced at around £300 from Petsoff

On the cheaper end of the scale is the Prelude a simple 44Khz 16-bit player/sampling card which oddly has no physical support to hold it into a slot apparently for A1000 compatibility We managed to improvise some support anyway and it seemed to work fine It comes with basic software and the obligatory AHI driver in addition to a welcome AudioLab 10 driver

The Prelude is available from Albrecht Computer Technik in Germany (+49-4773-891073) No price details are currently available

We re somewhat unhappy with the situation sound card wise There's not a lot of interest in selling the cards they re too expensive and [illegible] has been quite [illegible] makings of a pro[illegible] were it not for these [illegible] the AHI audio RTG [illegible] the way to solving [illegible] All we need is cheaper [illegible] one to sell it

Graphics cards

We come to the holy grail of Zorro cards probably the single greatest reason why anyone would choose to add an expensive and complex Zorro expansion to an A1200 It also probably swayed many of those big box Amiga owners into forking out extra for a 2/3/4000 Adding a graphics board leads to a miraculous change Unlike sound cards almost everything benefits from the change right away (apart from most games)

The two big players of the moment are the Picasso IV and Cybervision 3D cards Go straight to page 58 for this month s review of the Picasso IV and a new look at the Cybervision 3D with new software Both of these cards are dual Zorro II and Zorro III autosensing cards The extra speed of Zorro III has a lot to offer graphics cards hence the support in that area In fact they are often the only Zorro III cards in a typical big box Amiga

Most of the older cards such as the Retina (Z2) and the Retina BLZ3 (Z2/3) Picasso II (Z2) Picollo (Z2/3) GVP Spectrum (Z2/3) CV64 (Z3) and so on are supported by the excellent CyberGraphX RTG software This is extremely well supported and very compatible If you re looking to pick up an older card second-hand we advise you check to see if there s a CyberGraphX driver The original software provided with the Retina Spectrum and Piccolo was particularly dire and will need to be replaced with CyberGraphX available from Blittersoft

The new card front can be summed up quickly as follows the CyberVision 3D is inexpensive at around £175 but you'll need the scan-doubler module to even switch Amiga video Otherwise you ll be needing a two monitor set up It also has some nice MPEG video players and the 3D functions may take off in the future

The Picasso IV is more expensive at £299 but comes with a built in flicker fixer meaning you only need one SVGA style monitor It also has the edge when it comes to performance It also uses a different RTG software called Picasso 96 which s largely CyberGraphX compatible anyway The CyberVision 3D can be obtained from Gordon Harwoods while the Picasso IV comes from Blittersoft See the Picasso IV review and CyberVision 3D update in this issue on page 58

Company contacts	
Power Computing	01234-851-500
Golden Image	0181-900-9291
Gordon Harwoods	01773-836-781
Blittersoft	01908-261-466

◀ Sound cards, graphics cards I/O cards-- just some of what Zorro has to offer.

Continued overleaf ▶▶▶

Other options?

If you don't fancy the Micronik tower there are options. You can get the board on its own and DIY the tower. Get yourself the busboard and passthrough connector first of all, and remove the motherboard from your computer and connect the two together. You will have to rig up support for the bottom end of the busboard. A small block of wood can be glued to the top of the metal shield around the RF modulator on the Amiga motherboard, a screw can then pass through the mounting hole in the busboard and into this block. A spacer can be wedged between the two boards at the front end or a small bracket can be constructed to hold it in place. If you are a bit of a DIY wizkid you might want to produce a cradle to take the A1200 motherboard and the busboard. If you make your cradle out of metal, use some insulating material to stop the boards coming in contact with it. The A1200 comes with a plastic insulator beneath it, but you will have to rig something up for the busboard.

The tricky bit

At the back of a tower case you will see a group of horizontal slots. The Zorro boards are meant to align with these slots to allow things to be plugged into them. The addition of the busboard adds about 4 cms to the depth of the mother board, and many towers are too narrow, cards plugged into the slots will end up beyond the holes. If that wasn't enough of a problem, you will also find that to get a card to fix to the back slot properly the motherboard will have to be mounted right up against the back of the case, making it very difficult to connect the rear motherboard sockets.

There are two solutions to this. One is to cut a vertical slot in the back of your towercase for the motherboard sockets to fit through. The other is to cheat. If you want to go for the first and more elegant option, find a case that has plenty of space beside the rear slots, line the motherboard up inside the case in the position it will have to be in for Zorro cards to reach the rear slots and carefully mark out where you will have to cut. Use a fretsaw or a jigsaw with a metal blade and use a metal cutting lubricant. Wedge pieces of wood against the rear plate before you cut it. The more the rear plate is able to flex, the harder time you will have cutting.

How to cheat

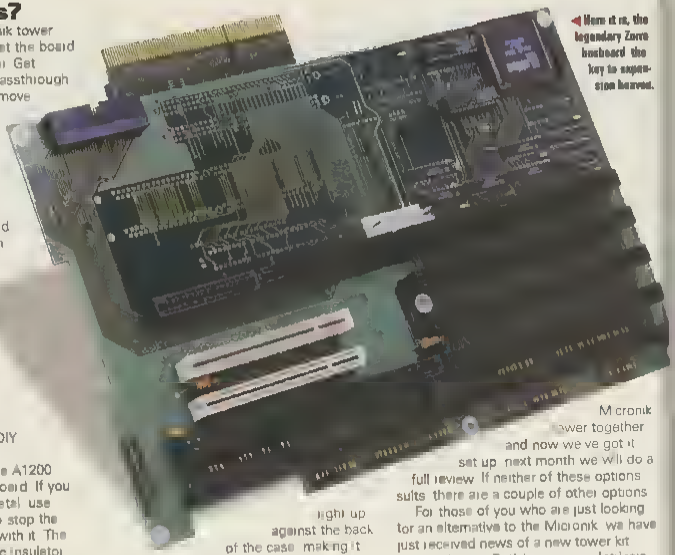
The easiest method is to cheat. Mount the motherboard as described last month. Cards are slotted in as normal but do not reach the rear of the case. You will need some additional support for your cards this way. A couple of wooden uprights with small shelves are ideal. Cables are passed through the holes in the back of the case and plugged straight into the cards. Messy, but it works.

Alternatives

We have covered the basics behind installing the Micronik board into a DIY tower, but there are so many variables involved that this can never be any more than a guide. We have also given you an idea of how it can work, it's to put the Micronik tower together and now we've got it set up, next month we will do a full review. If neither of these options suits, there are a couple of other options.

For those of you who are just looking for an alternative to the Micronik, we have just received news of a new tower kit coming from a British company, Intrinsic Computer Systems. Also designed to work with the Micronik busboard, Intrinsic's Amigo is a CE approved metal case with more drive bays than the Micronik and at a slightly lower price. This case want to press at the same time as we did, but we are hoping to get one in for review to go head to head with the Micronik next month.

Rivals to the busboard are even rarer. The Ateo bus board, a similar concept but using their own non standard data bus is currently undergoing patent applications, but promises to bring the advantages of Zorro cards at a fraction of the cost – the aim is to produce the busboard and a graphics card for around £160, under half the price of the cheapest Zorro equivalent. Well, that just about wraps it up for now. ■



◀ Here it is, the legendary Zorro busboard, the key to expansion heaven.

A Final Word ...

We are repeating the special offer for the 44-40 pin IDE adapter from part 1. If you had a delay ordering previously, it was because of the phenomenal response – Stack sold many hundreds – but new stocks are now in. We are also trying to track down a source of Amiga power connectors to save you cannibalising your PSU.

We'll be covering this topic further in the future – why not write in and tell us your experiences? Good luck and happy towering! – Mat & Andrew

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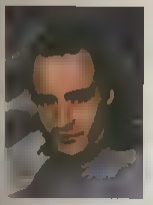
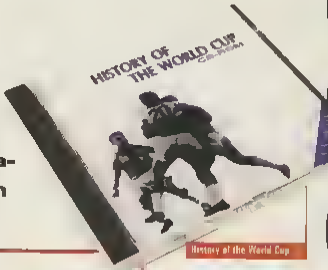


Taking over the reins of the game coverage from Lisa, I'm bringing you the games section this month, featuring a special previews focus and an interview with Peter Molyneux.



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In the shadow of Time

The Final Odyssey

Trapped 2

Previews

In a change to tha advertisad program, our praview pagas go into future gaming overload.

There is a sense of doom amongst most Amiga gamers - and I'm not talking about [illegible] on perspective shoot 'em [illegible] we all experienced the [illegible] decay of the Amiga as a [illegible] platform over the last few [illegible] rise and rise of the [illegible] and the transformation [illegible] PC from a drab unfriendly [illegible] into the world a [illegible] expensive games machine [illegible] to ring a death knell. The [illegible] behind this fall from [illegible] are many and varied but the [illegible] tory the games compa[illegible] with that the A[illegible] just not up to the task [illegible] entirely true – certainly if you have an accelerator and a CD-ROM drive. And just to prove it we have spent the month searching out the most exciting products in development. Here is a small sample – if you want to believe that Amiga gaming is dead don't read this.

Aimagica – Scions of a Forgotten World

Type. Dune II/Warcraft clone

Developers: DSP

System. TBA

Release TBA

This sort of real time strategy wargame is becoming enormously popular and seems to be something of a holy grail amongst Amiga game programming teams. DSP are a Swedish programming team with a lot of ambition. Scions takes the basic form of Dune II but transports it from a Science fiction setting into a fantasy one.

Ordering your forces to do anything from cutting down trees to launching full scale attacks on the castles of your foes, you have to find the balance of resources necessary to build up your forces to achieve final victory.

One of the most intriguing things about this game is that [illegible] probably the first Amiga game [illegible] be written with full [illegible] to get ability in mind. Many games now support retargetable graphics through the Cybergraphics library to allow you to play them on your graphics card but this unusually supports the AHI system to allow you to retarget the sound through a soundcard too.

Brainkiller

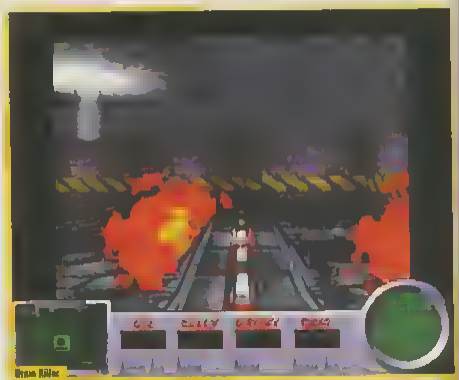
Type Doomclone

Developers: Titan systems

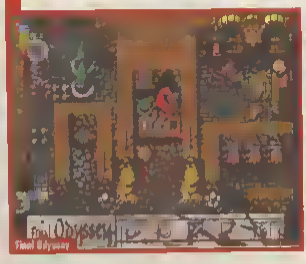
System Will require good acceleration for playable speeds

Release Imminent

There has been a little demo knocking around for the last little while of a doom game called Braindead. In fact you'll see a review of it this month in the PD section. The programming team behind this game has been promising that it would become a commercial release and here it is. A demo of the game arrived in the office yesterday and we've had enough of it already to



assure you that there is a lot more in the game than there was in the demo. The old favourite punch and kick routine is still there but there were a whole lot fewer explosions in Braindead than there are in Brainkiller. There's going to be a lot of competition for the crown of Amiga doom clone king over the next few months and this one is going to be well in there.



Explorer 2260

Type Space trader simulation

Developers Digital Anarchy Software/Chris Page

System 030 strongly recommended 4mb mm hard drive

Release: Don't hold your breath

This one could well be the game that Frontier 2 might have been. It's still pretty early days for Explorer 2260 yet but author Chris Page has some very interesting ideas for his future trading game. [illegible] 100 ships [illegible] upgrades and textured polygons all [illegible] exciting enough but the epic [illegible] are what makes [illegible] reality interest[illegible] can lead to

missions a LOT more complex than "loc and assassinate this bloke" – some planet somewhere. Even up to interplanetary war. Promotion in rank actually means something: the player can have eventually be put in command of a fleet of space stations. The bulletin board idea of Frontier Elite 2 is vastly extended to make the Interstellar Information Network (IIN) a kind of futuristic internet which the player can actually post their own adverts to.

Some people have pointed out the similarity in concepts between Explorer 2260 and Babylon 5 – this is not Babylon 5 – the computer game but the influence is strong and B5 fans should be very happy indeed.

Final Odyssey

Type Adventure

Developers: Vulcan

System AGA CD ROM

Release TBA

Vulcan made their names with the top down talkie adventure series Valhalla (you KNOW what that is) and Final Odyssey – Theseus vs the Minotaur looks to be a return to their roots. Except that Final Odyssey offers graphics to drool over and more action than the Valhalla games too.

Forgotten Forever

Type Dune II Clone

Developers Charm Design

System: Minimum AGA hard drive CD ROM 030/50 highly recommended

Release TBA

One of the game projects attracting the most interest at the moment Forgotten Forever is real time action strategy game in the Command and Conquer mould inspired by Dune 2 the brilliant predecessor to C&C. Forgotten Forever promises to be something really special. The Amiga's hardware is actually very good for this sort of game and there is no reason why Command and Conquer shouldn't be ported to the Amiga but if this effort from Hungarian programmer Ferenc Zavack and graphic artist Csaba Kemer lives up to the screenshots that have been circulating might not need it.

Features include landscapes 128 times as large as in Dune II multiple terrain types 25 vehicle sampled speech basically everything you would expect from a rival to C&C. The author is even talking about implementing TCP/IP modes for network multiplayer games. Forgotten Forever will run on most 256 colour screenmodes and will be CyberGraphX compatible. Rest assured that as soon as we see a working demo we'll tell you more.

Foundation

Type. Dune II/Settlers clone

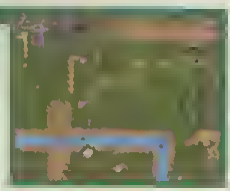
Developers Paul Burkey

System A1200 & CD ROM minimum 6Mb highly recommended

Release End of year?

Originally inspired by Settlers author Paul Burkey cites Warcraft 2 Command and Conquer and Mega lo mania as other influences. Foundation will display screens up to 640 by 480 and uses disk caching to allow many megs of data to be immediately available. Gameplay features include a massive database of all the people in the kingdom you rule many different types of building advanced combat strategies inventions wizards and an intricate trading system. You will be able to play against up to three computer players or in split screen mode against a human and up to two computer players.

The author has been looking for support for this title a problem that plagues independent programmers but should have arranged a backer by the time you read this.



Genetic Species

Type Doom Clone

Developers: Ambrosia / Vulcan

System A1200 8mb CD-ROM minimum

Release date "As soon as possible!

Everyone said it couldn't be done until Gloom Breathless Fears and AB3D proved them wrong. Amigas can do doom clones but this one is a bit different. Previous titles were playing catch up whereas this one is a genuine Doom beater. OK so the PC games market has moved onto Quake but here at last is a Doom game that your Pentium owning friends will like.

This game really likes a decent set up. Give it a graphics card and an 060 and you have a stunning game. Fast smooth textures stunning lighting and fire effects were all waiting to see how it pans out when the gameplay is fully implemented. Until then check out the demo on our CD for that flame-thrower around and watch those brilliant light sourced glowing fires effects.

Hellpigs

Type Adventure

Developers Vulcan

System 020 2mb RAM CD ROM drive AGA and 6MB for FMV

Release August

The game that persuaded Vulcan to go CD only this was originally going to come out in a cut down version for the floppy customer but even that would have taken 22 disks!

The Hell Pigs are a secretive special forces [illegible] perhaps even some kind of [illegible] squad. All that [illegible] that [illegible] unexplained [illegible] close [illegible] behind. With a plot that sounds like a cross between the X Files and Predator and graphics that look very interesting indeed this game could be a real winner. Vulcan certainly think it will be.

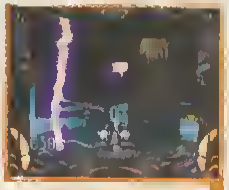
In the Shadow of Time

Type Adventure

System. AGA

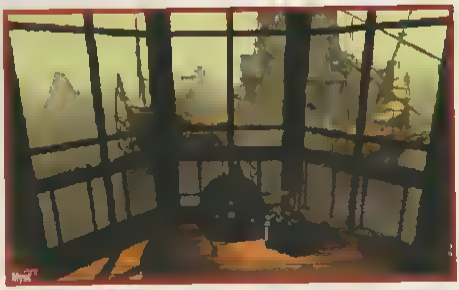
Release TBA

When Henrik Sanding says he's going to write an adventure game



The CD-ROM revolution

The observant amongst you will have noticed the frequency with which the word CD-ROM appears under system requirements. No-one wants to be dictated to about what add-ons they should buy, but there is no doubt that if you want to play games in the future, a CD-ROM drive must be high on your shopping list. You simply can't make games compete on floppy any more. Many of these games simply wouldn't fit on floppy disk – Hell Pigs would take 22, Wendette would take 40, Myst would take around 700.



that beats the hell out of Monkey Island you might feel justified in being a little sceptical. Once you've tried the demo a little you won't be so sure he isn't going to do it. The game flows very well the system of command selection being very intuitive and smooth. The graphics are looking very impressive at the moment, with glorious 256 colour screens running quickly and easily and very solid animation. It is always however the quality of puzzles and the avoidance of cheesiness in the jokes which makes or breaks an adventure and on those fronts we will just have to wait and see.

Myst

Type: adventure

Developers: ClickBOOM!

System: AGA 030 4Mb and CD ROM 040 and 8Mb recommended

Release: Summer

Myst is generally regarded as the greatest CD ROM adventure of all time and is reputedly the biggest selling too. An enormously atmospheric graphical treat this game entranced millions when it hit the PC and Mac some time back.

The Amiga version is actually the result of an Internet hoax a fake demo of an Amiga version appeared on the Aminet about a year ago and the huge interest this spawned made MYST developers Cyan wonder whether there wasn't room for an Amiga version after all. ClickBOOM! stepped in with an offer for the licence and are rushing it out for the summer. This is presumably because Cyan want it to co-incide with the publicity for the forthcoming Riven the five CD epic sequel to Myst which ClickBOOM! will no doubt also convert if interest is high enough. Maybe we should start spreading rumours of an Amiga version of TFX!

On Escape

Type: Platform / Adventure

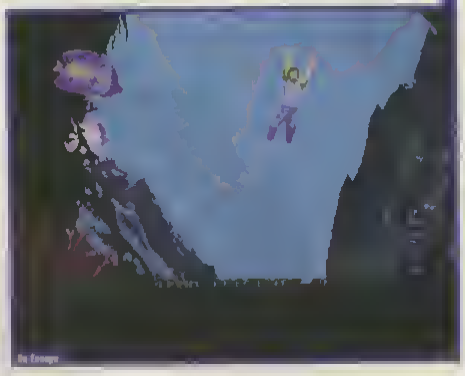
Developers: The Invictus Team

System: AGA, 4mb CD ROM drive

Release: TBA

I've always been a huge fan of Another World from Delphine a platform game that had a freedom of movement and action which no platform game before or since seems to have managed to match. The Invictus team colleagues of Forgotten Forever's Charm Design in Hungary seem to feel the same way because they are working on a title which owes more than a little to Another World.

On Escape contains many interesting graphical features. As well as giving the main character over 600 frames of animation Invictus have included graphics routines for reflective puddles rippling screens and waving lights for underwater screens realistic rainfall beams of light and so on. There are full screen animations throughout the game and huge intro sequences. I don't know about you but I can't wait



Trapped 2

Developers: Oxyron

System: AGA, 6Mb CD ROM drive minimum 030/50 16Mb recommended. Graffiti and Picasso 96 support

Release: Summer

Wait a minute Trapped 2? Whatever happened to Trapped 1? Well you may have seen a demo of it on a recent CUCD CD ROM but this seen metical game from Germany has as is something of a trend with German games never been released over here. This is something that CU Amiga intends to doing something about and rest assured we will be bugging some of the big UK software houses about picking this little beauty up.

Trapped 1 was an RPG with a Doom engine. And what a doom engine it was. Fast and smooth and very atmospheric. Trapped 1 had some truly impressive features such as some excellent light sourcing routines and if you want to impress the hell out of anyone just wander past a light source and show them that lens flare!

Now if Trapped 1 is so exciting what can Trapped 2 be like? Well if your machine is up to the task try out the demo on this month's

CD and prepare to be blown away. This game is going to be HUGE. While most of its rivals are still struggling to match the clunky old style of Doom this game is doing the kind of advanced 3D of the most up-to-date first person games on the PC or Playstation proper 3D graphics excellent textures full light sourcing and genuinely 3D polygon based monsters. There is of course a down side – the fastest Amiga on the planet is only as good as a very low end Pentium PC for rendering 3D polygons and while this is just about playable on an 030 an 060 and graphics card is really called for.

What would really make this game would be a PowerPC version to go with Phase5's PowerUP cards – it would probably sell a few of the cards too.

Wendetta

Type: Shoot 'em up

Developers: Vortex Design

System: AGA CD ROM

Release: Imminent

This blaster has been on release in Germany for a while now and Islona have just picked it up for distribution in the UK. Wendetta is played from two viewpoints one a standard horizontal R-type view the other the kind of swirly 3D tunnel effect that we've seen in demos for years and always wondered why it never appeared in games.

The most impressive thing about this game is that it manages to tie in the fast moving blaster action of yore with being up to date 3D rendered graphics. Very nice to look at and the previews we've seen seem like a satisfying shoot 'em up too. ■

Andrew Korn

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The History of the World Cup

AMIGA SUPERSTAR

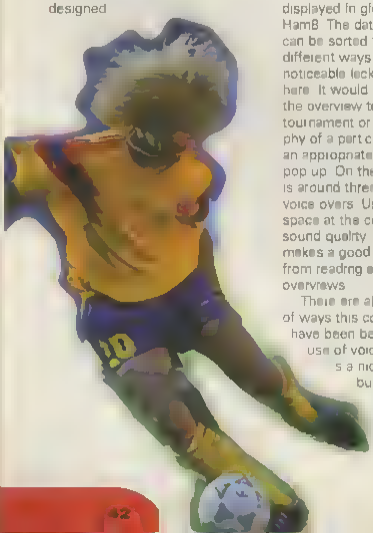
■ Price: £14.99 incl P&P ■ Publisher: Wisedome Ltd. © 0171 702 9823

CD-ROMs are the future of Amiga entertainment – and here's one that will keep Amiga owning footie fans entertained for hours.

Wisedome's History of the World Cup CD ROM is not one of those all platform affairs where the game's the ball but the presentation is seen daily. This is an AGA Amiga specific title written using the CanDo multimedia system. An intuitive system of buttons and menus allows you to find your way through the disc with ease and supports all the navigational freedom you would expect with the casual browser in mind. You can examine the information by year reading write ups of every single match or you can examine the performance of individual countries over the history of the tournament.

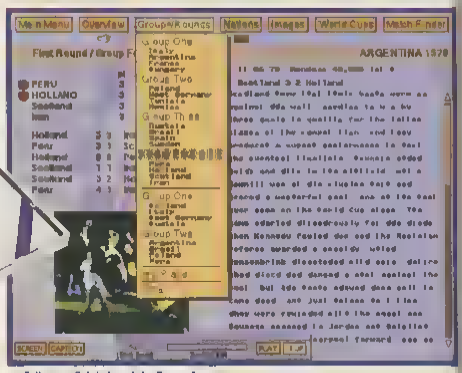
Calling Statto

Containing reams of information about every World Cup tournament there is a danger that a project like this would end up being a CD ROM equivalent of those impenetrable phonebook thick football factbooks that footie anoraks have lying around their houses. However this one is designed

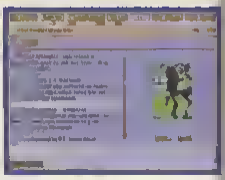


The multimedia capabilities of the CD ROM format have not been ignored. The hundreds of pictures can be viewed alongside a caption to give them context or displayed in glorious full screen HamB. The database of images can be sorted through in several different ways, but there is a noticeable lack of integration here. It would be nice if selecting the overview text for a particular tournament or selecting a biography of a particular player caused an appropriate image or two to pop up. On the audio front there is around three hours of sampled voice overs. Using samples saves space at the cost of sound quality but it makes a good change from reading all the overviews.

There are all sorts of ways this could have been better. The use of voice overs is a nice idea but a little sterile. Some use of relevant samples – crowd roars, commentary and so on – would have added a lot of atmosphere. A cross referencing database would have been a nice touch – we decided to look for the largest score in any world cup match but the only way of doing this was to search through them all. Niggling points like this mean that this CD ROM is more the browsers encyclopaedia than the ultimate reference.



▲ Following Dalglish and the Tartan Army's progress in the 1978 World Cup



Goooooaaall

The History of the World Cup CD ROM is almost frighteningly well researched. The text is well written, concise enough to avoid boring the reader while remaining very informative. The archive of images is impressive and Wisedome have even managed to find pictures dating back to the very beginning. For about the same price as a book on the subject this disc offers you a lot more in a very friendly format and goes to show there's more to CD ROM than clipart collections.

Andrew Korn

HISTORY OF THE WORLD CUP

- workbench version xxxxx
- number of disks ..... CD ROM
- RAM xxxxx
- hard disk installable xxxxx

A500 graphics 80%
A1200 sound 80%
A1200 playability 81%
A3000
A3000
A4000

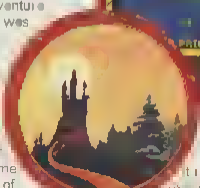
OVERALL
A football fan's delight.
90%

Castle Kingdoms

■ Price: £12.99 (incl P&P) ■ Publisher: Mutation Software ✆ 01705 672616

Gauntlet twisted into an isometric perspective? The classic coin-op is updated with Mutation's latest offering.

▲ Enter the blue castle and seek the sapphire



Ohhh yes indeedy the deceipt old timers remember an arcade adventure of TG Gauntlet which was the most fantastic multi player game since the invention of the crochip. Dungeons and Dragons from an overhead perspective Gauntlet allowed up to four gamers at the same time to adopt the role of Dwarf Warrior Elf or Priest and charge around complex mazes fighting assorted nasties while collecting food and potions. Amiga gamers were hoping that when the Amiga version of the game finally came out it would be totally faithful to the original. Alas our wish was never granted. All these years on and a game appears which looks like Gauntlet's great grandson. Could it recapture that old [illegible] nostalgia? Enough of my nostalgia let's get on and discuss Castle Kingdoms.

Gemstones

The game world of Castle Kingdoms is divided into five distinct sections or castles. In a throwback to the classic RPG plot lines of the past the aim is to recover the five mystical gemstones hidden within each castle kingdom that form a powerful magic talisman. Leading a party of five adventurers Knight Princess Warrior Elf and Wizard you have to fight your way through the hordes of demented creatures that are let loose upon you. As you penetrate the castle's defences you find potions and spells which you can pick up and use to your own advantage.

Lemming devils

The graphics are stylistically somewhere between the cute Japanese RPG style of Zelda and the distinctive race of little people that populate Sensible Software games. The isometric layout of the mazes works very nicely and is full of atmosphere although the graphics aren't in the same league as the likes of Chaos Engine 2 and the over flattened perspective can be confusing.

Castle Kingdoms is easy to get into and flows well enough but lacks weight. There is no multi-player option which is a real oversight. It was in multi-player mode that the original Gauntlet really shone. Multi player modes can turn an otherwise ordinary game into a masterpiece and a game like this just cries out for it.

The rather limited intelligence of your foes means they have a tendancy to turn around rather more like slightly miffed chickens than fiendish orcs. The level of challenge they provide is fairly constant. Progressing through the levels gives you little feeling that you are moving forwards so much as sideways the castles differing a lot in colour but not much anywhere else.

Castle Kingdoms is an average game but way too easy and far too repetitive for the seasoned Amiga games player. I managed to make my way to the end on my first game. That in itself is its biggest stumbling block. Even though it's quite cheap any game needs to present some kind of challenge. Even so it could be worth a look if you specifically need a game that's not too taxing maybe for very young kids. ■

Mark Forbes

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CASTLE KINDOMS

worldwide version	all
number of disks	1
RAM	1
hard disk installable	yes

A500	
A1200	graphics 66%
A1500	54%
A2000	60%
A3000	61%
A3000	
A4000	

OVERALL

OK for the younger Amiga games player.

60%

Reach for the stars

He invented a whole new type of computer game and his name sounds like a food blender: Peter Molyneux gets the star treatment.

Name: *Peter Molyneux*
Age: *37*
Born: *Kent*
Occupation: *Game Developer, Bullfrog Productions*
Biggest Successes: *Populous, Powermonger, Populous 2, Syndicate, Theme Park, Syndicate Wars...*

CU: Tell us how Bullfrog Productions began

PM: Initially Bullfrog was created by myself and Les Edgar in 1983 for games players by games players, although we actually started a business producing data base and account packages for the Amiga. After a couple of low key games projects Les and I felt ready to create a game which would be unlike anything else then available. The inspiration for Populous was partly derived from our previous foray into business software. Through out under standing of the Amiga's capabilities we were able to create the artificial intelligence engine which, although it has been refined and improved, still forms the foundation of all Bullfrog programs to this day.

"To be totally honest, the main reason we worked on the Amiga was because we were given several free..."

CU: Did you realise the seminal nature of Populous during its development?

PM: Although I realise now that Populous has created a new genre of game, at the time I was working on it I had no idea that this was what I was doing. I was just working on a game that I wanted to play. In fact I was nervous that no one would think I was any good at all.

Our offices were visited by a journalist who was going to do the first review of Populous and after he had played the game we went down the pub. After a few pints I plucked up the courage to ask him what he thought of Populous and he replied that he thought it was the best game he had ever played. My first thought was that I must never let him play the game again, as I was convinced if he saw it again he would realise that his initial impressions had been mistaken.

CU: What are your personal favourite Amiga games?

PM: Dungeon Master and Speedball.

CU: Do you think the rise of the new game consoles has had a detrimental effect on the quality of contemporary games?

PM: Yes. I do think it's tragic that from the giddy heights of the mid eighties when one in every four homes had a home computer and therefore there was a wealth of bedroom programmers, that today there are so few. Nowadays it's just too expensive for people to develop games in this way on the consoles and on PCs which is a great shame.

CU: If the Amiga was to get back on track as a mass market entertainment computer, would you consider developing games for it?

PM: Of course I would, but in saying that, it's obvious to me that in order for the Amiga to regain its former status it needs a very big push. Its great strength has always been its accessibility and this coupled with a very significant upgrade in technology could make the machine more interesting for developers like myself.

CU: What was it about the Amiga that made it your first choice?

PM: To be totally honest, one of the main reason we worked on the Amiga was because we were given several free machines by Commodore, but also at the time it seemed to be the machine without bounds. It had great graphics, good sound and was technically miles ahead of anything else around at that time.

CU: Would you consider making available the source code for Syndicate Wars, so that it could be converted to the Amiga?

PM: Yes, definitely because I don't see any real reasons or problems why we couldn't do that. After all we have no secrets or things to hide from anybody. ■

Mark Forbes

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Tips Central

More tips and cheats to spoil your gaming fun, with an exclusive barrel of codes for Worms TDC straight from the programmer's mouth.

WORMS TDC

Worms creator Andy Davidson has kindly supplied us with a team of secret codes for Worms The Director's Cut. Now we can see why the game was delayed so long. Andy tells us these are just a few of the secret codes included in the game, so we'll badger him for some more for the next issue. All of these codes should be typed in exactly as they appear here.

On the title screen

JAMIE AND HIS MAGIC TORCH
Special weapons on/off
SUPA SHOPPA
Weapon crates placed on landscape instead of mines
REO BULL
Worms can jump higher, punch harder
PESTILENCE (Apocalyse Mode)
Worms burn when they die
LITTLE FLUFFY SHEEP (Sheep Mode)
Shooting any crate liberates a sheep
Unlimited fuel with Super Sheep!
TOTAL WORMAGE (Nostalgia Mode)
Original Total Wormage logo on panel
Weapon names put back to original names
NUTTER
All weapons, even each shot of an Uzi, do the damage of dynamite
MAGICAL MYSTERY TOUR (Mystery Mode)
Worm names aren't displayed
KARTONG APA (Monkey Mode)
Weapon names translated into Swedish!!
Kenny on a Rope!!!
OMNIPOTENT BLUE WORM (God Mode)
Worms aren't damaged by shots
All worms can walk on water
ARTILLERY
Worms can't walk or jump
PONG: Mouse pointer can hit grenade around
MAGNET: Grenade attracted to mouse pointer
GRAVITY: Grenade affected by gravity
BETONG ASNA: (Donkey Mode) – Concrete Donkey on title screen
BOING: Red+white Amiga ball on title screen
MUSIC: Title screen music on/off
WEIRDED: Weirds title screen colours
VERSION: Display version number
CHIPRAM: Display free chipram
ANDY
TONY
KILBURN
LA CIENDA HONOURAS
TBL
FISK
BEN HUTCHINGS
AMIGA
CHEAT

Landscape generator bits

LOW: Low water level (default)
MEDIUM: Medium water level
HIGH: High water level
WEIRDED: Weird landscape
NORMAL: Normal landscapes
1471: Play last level again
CUSTOM: Picks random custom level
GRAFFITI: Picks random graffiti level
FOREST: Only generate Forest levels
CAVERN: Only generate cavern levels
FOREST CAVERN: Only generate Forest cavern levels
ALL: Generate all levels

BANSHEE

This tip cheat, along with all the following tips on this page, comes from Keith Krellwitz. For those with the AGA disk version, type FLEV17 and press Return whilst on the title screen. You will now have infinite lives and be able to skip levels using the function keys. The screen will flash to let you know it's worked.

Alternatively, type I AM EXQUISITELY EVIL then press Return whilst on the title screen or during the intro. This will change the names on the high score table and you can now kill polar bears and people (if you're that way inclined). Once again, the screen will flash to confirm you've entered the cheat correctly.

CD32 Banshee players can do the same as above by entering KANNIJADE KREW on the high score table to invoke the infinite lives/level skip cheat, using the top joypad buttons to jump levels. To do the polar bear thing, enter MARY WHITEHOUSE on the high score table.

BUBBLE AND SQUEAK AGA

Enter any of the following four passwords for various benefits:
HEFSBEER: 9 guy and 9 hearts
MAXIBABY: a new difficulty setting
BUTTHEAD: infinite hearts and lives
WHO CARES: a message from the programmer

GHOSTS & GOBLINS

A classic if ever there was one. Dig it out and enter your name as "JIK" to make yourself invincible, but you'll still lose your amour if you get hit (we couldn't find a copy to test this, so you may have to leave out the quotation marks). Also try typing DELBOY on the title screen for the same result.

PARASOL STARS

Press the right mouse button to skip to the next level. During the game, type A WORD to activate the cheat mode. If this doesn't work, try typing CYNTX instead. Nothing will happen until you use one of the following cheats:

Now use the following keys:
M – get all three stars
T – end the stage
G – kill all baddies
1-7 – skip to that stage
C – extra credit
F1-F10 – skip to that level
O – die (very useful)
B – skip to bonus screen
X – skip to extra level

To find the hidden world, whilst on level three kill all three nasties in the box. Some blobs like green peppers will appear. Collect them and you'll be whisked off to the secret level.

When in Ocean World on the fourth level paralyse all the nasties and get the purple heart in the top left corner (if there is one). Get all three green fruits and you'll be transported to the last world.

Get yer free games!

So you've got some decent tips have you? We'll see about that. The best tipster each month is entitled to a randomly selected mystery Hit Squad game, so don't keep 'em to yourself! Troubled adventurers on the other hand, can write in to Adventer Helpline, CU Amiga, 37-39 Millharbour, Isle of Dogs, London E14 9TZ.

Indiana Jones and the Last Crusade

On the zeppelin I keep getting stuck at the ticket collector (what with not having enough money to buy a ticket and all that). Presumably it's got something to do with the travel pass, but without anyone to sign it it's not much use.

Jim O'Connor, Co. Antrim

You don't actually have to get on the zeppelin, but if you do, as you [illegible] you will need the travel pass signed. In this case, before you get to the airport you need to take a trip to Berlin, where you can get it signed by Hitler himself. At the airport get Henry to chat to the man with the newspaper while you pick his pocket. Alternatively, pick up the book about how to fly a plane from the Italian library, and you can then steal the biplane from the airport instead.


Indiana Jones and The Temple of Doom

Future Wars

I've just got the hang of Future Wars, which I picked up at a local car boot sale recently. I've worked out how to use the time machine and teleported to the Medieval age, but once I get there I get beaten when I get to the muddy village and beaten up by monks at that!

Ian Young, Basildon

When in Rome... the thing is, you're still dressed in jeans and trainers, which to a Medieval monk probably looks like the apparel of Satan. The trick is to go back to the river bank, climb the tree, wait for one of the monks to come along for a swim, then jump into his clothes while he's in the water.

Leisure Suit Larry III

I've been wrestling with this lerd little adventure for a while but I'm having trouble with the combination for the locker in Suzi's locker in the sports club. I've made a note of the wording on the back of the keycard, but I'm still no further down the line.

Alan Higginbottom, Milton Keynes

This is a bit trickier than you might have hoped for, but here goes. Open the magazine which came with the game manuals. Search the pages until you find the adverts for the three firms listed on the back of the keycard. Take a note of each of the page numbers (making each one into a two digit number by adding a zero in front of any single page number). Now place the numbers together and you'll have the six number combination.

Legend of Kyrandia

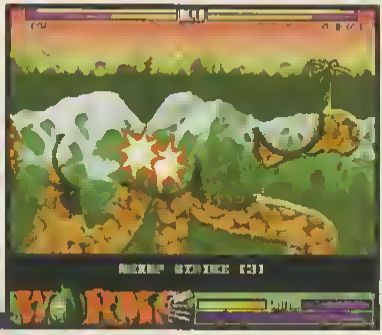
I've made a fair bit of progress in the game. I've got all the rocks, a good deal of the emeralds and I've just beaten Malcolm. However, now I'm stuck in the caves. Is it something to do with the Twilight Place?

Richard Porter, Fife

It's the gold coin that will get you out of this situation. As this is quite an easy game and we wouldn't want to spoil it for you, let's just say "we wish you well". Think about it.

Police Quest III

I've spent far too long driving around trying to find the industrial estate, but then my map reading was never up to much. What's the secret?



Terry Whitcutt, Leicester

This is a simple one. The industrial estate is on 325 South Second Street, as it says on the map!

Operation Stealth

Can you help me with Operation Stealth? I know it's a bit old, but I've just got back into adventure games and I found this at the bottom of my collection. I've got through the rat maze, tied up the guard, given the man water and swapped the security stamps, but I can't get up the fingerprint controlled elevator.

Simon Dorf, Penzance

Your prints obviously don't work, so you need to find some that do. Go to the guard's shower room and pick up the empty glass. This has the guard's prints on it, which you can lift off with the end of the cigarettes in your spy kit. First you'll need to empty the tobacco from the cigarettes, then use the paper to take a copy of the prints from the glass. You can then use the paper to activate the lift.

Monkey Island

Just when I thought I was cruising through Monkey Island (bad pun intended) the crew of my ship has turned against me. I've tried to please them but they just don't seem to want to listen or take orders. Do you have any tips for whipping them back into shape?

Nigel Hyde, Folkstone

You could try going on a management course (they're the answer to everything, so I'm told). Otherwise, climb the rope ladder and get the flag. Go down into the hold and get the rope and fine wine from the chest. Pick up the kegs to get the gunpowder. Go to the galley, pick up the pot and open the cupboard to get the cereal. Open the cereal and inside you'll find a prize (a key). Use this to open the chest to get the cinnamon and the recipe. Go to the galley and use everything according to the recipe on the cooking pot. When you regain consciousness, use the business card Stan gave you on the fire... then get some more gunpowder. That should be enough for now!

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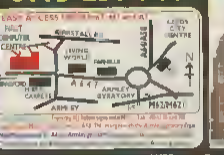

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Depth isn't the word! We've put so much time into researching and testing this gear, you nearly got your magazine a week late this month! Go on then, get stuck in.

Techscene

50 PC-Task vs PCx

The two big PC emulator packages go head to head in a serious test in which both are put through the mill

54 Turbo Print 5

Today's 24-bit high resolution printers are way ahead of the Workbench printer preferences – Turbo Print to the rescue!

58 Picasso IV

It could just be the best graphics card ever... we give it a good roasting in some thorough speed benchmark tests.

60 Cybervision 3D Update

Now that Picasso IV has arrived and Cybervision has had a price cut, we take a second look at this sleek graphics card

61 Net Connect

All you need to get netted on one CD? It sounds obvious, but until now no-one had managed to pull it off

62 Buffered IDE Splitter

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62 Catweasel

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63 Make CD

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64 PD Scene

It's just like the 'old days' over in PD scene, with all kinds of wacky games animations and other stuff being released

67 PD Utilities

Once more a varied bunch of tools and oddities, including some Klingon language and physics tutors plus a satelite TV guide

70 CD-ROM Scene

Cartoon clipart, sound effects samples, the Epic Encyclopaedia and yet more bits and pieces go spinning round our CD drives

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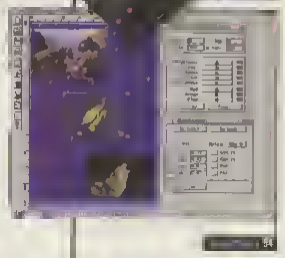
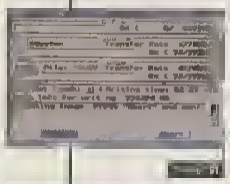
Some of the best readers artwork yet goes on show in the art gallery this month from renders to hand drawn masterpieces





With the two leading PC emulators recieving updates almost simultaneously, have they finally bridged the PC-Amige gap? We put PCx head to head with PC-Task to bring you the answer.

PCx 1.1 VS

■ Price: £49.95 ■ Developer: Microcode Solutions
■ Published Worldwide: Blittersoft © 01908 261 466

Nothing matter how strong you feel regarding the sheer superiority of the PC computing world, it means that it's just [illegible] that you have a different [illegible] to necessitating or wanting to [illegible] PC files and programs.

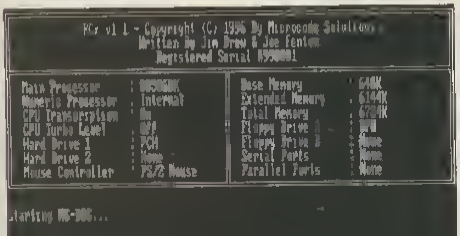
For years Amiga users have had recourse to [illegible] DOS to get partial access to PC formatted floppy disks, even PC formatted hard drives and removable media. But just so [illegible] one data is one thing, doing something useful with it is something else entirely.

That's where PCx and PC Task come in. They are the latest version of the Amiga's current leading edge PC emulators. PCx is based on the former Emplant PC code and offers emulation of the Intel Pentium instruction set while PC Task 4.1 offers emulation of the 486 instruction set. More importantly both have been optimized for speed using new methods of emulation where PC code is partially translomed into Amiga 680x0 code before being run which can result in some major speed gains.

Stage setting

Traditionally the PC has run using Intel processors, starting with the 8086 and 8088 and progressing to the Pentium and Pentium Pro chips. The PC's memory comes in an initial 640k block, followed by optional megabytes of extended and expanded memory, two different ways to address memory beyond the initial 640k barrier which require different drivers just to get access to the memory. PC use a variety of graphic cards to generate display – these days graphics cards are of the "SVGA variety, roughly comparable to (although often much faster than) the current crop of Amiga 24 bit display cards. But many PC programs, including the DOS operating system that is almost inescapable, still use old low colour, low resolution and text modes, more comparable to basic Amiga native video output.

The rough PC equivalent to the Amiga Kickstart is the BIOS, and both PC Task and PCx provide a built in BIOS. Emplant PC required users to obtain their own BIOS for a time, but PCx includes its own. PC Task has always included a custom BIOS. However, to get anywhere, you'll need an operating system for the PC. Unlike the Amiga, where there is only one choice for the end user (AmigaOS 3.1 is the only real upgrade path) there are a few choices to make. The most obvious is to run Microsoft DOS 6 and if you've got the system specifications to handle it, Microsoft Windows 3.1 (Windows 95, the most recent Microsoft OS, is not currently supported by either emulator). There are some alternatives, however. There were a couple of competing DOSes for the PC, namely PC DOS from IBM and DR DOS, now known as Novell DOS. DOS of any flavour is typically cheap since in this age of Windoze 95, a standalone DOS is not in high demand.



▲ PCx's boot screen. The rainbow colours are not the pinnacle of graphic design

▲ Starflight II: a classic on any platform

386, 486, P90?

What does it mean to you that PCx and PC Task emulate different processors (the Pentium vs. the 486 respectively)? In truth, very little. As we'll see, the emulation speed on even the fastest Amiga does not really threaten fast 486 performance, let alone Pentium performance. The only real significance is that PCx's Pentium emulation would allow you access to a program which might have been specifically written for the Pentium – but again, not necessarily at Pentium speeds. The most notable recent examples are games that require the Pentium processor, but most of these also require features that neither emulator can offer, such as 3D acceleration or the Windows 95 operating system.

PC-Task and PCx have similar minimum system configurations. But as with all emulation, the more raw horsepower you can offer, the better, particularly when it comes to resource-hungry PC emulation. You absolutely need a 68020. AmigaOS 2.04 or better and 2-3 megs of Fast RAM. PC Task can theoretically be run without a hard drive but PC emulation is extremely limited solely from floppies. A hard drive with a good amount of space free, preferably unpartitioned space, is essential for getting any serious work or play done. Furthermore, for PCx an FPU is recommended to allow access to the Pentium FPU instruction set.

My test system is an Amiga 4000T running with an 060/50 on a CyberStorm Mark II, with 32 megs of Fast RAM and a CyberVision 64/3D graphics board. No punches pulled here.

Both PC Task and PCx are compatible with the 68060 processor. If you've been looking for an excuse to get an 060 accelerator, PC emulation is a pretty good one.

PC Task and PCx both take advantage of the AGA chipset, which will give you access to the PC's 256 color VGA modes. Both emulators will also take advantage of graphic boards running common software such as CyberGraphX (recommended). However, as of writing this, PCx was far more limited in this respect, only allowing you to promote a single mode to a

PC-Task 4.1

■ Price: £69.99 ■ Developer: Chris Hames ■ Publisher: Quasar
■ UK Supplier: Wizard Developments ✆ 01322 527 800

▲ Wonderland should have been ported to the Amiga. Work around that problem

```
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To quit press the RightAmiga-Del (or use PCTQUIT.EXE).

Processor: 80486     Conventional Memory: 640K     Extended Memory:  6144K
Technical:  (location $07FD1000  allocated 7168K)
Drive A is: DF0
Drive B is: Unavailable
HardDrive C is: pct
HardDrive D is: Unavailable

Starting MS-DOS...
```

▲ PC-Task 4.1 starting up. Note that you can use two floppies and two hard drive partitions or files simultaneously

CyberGraphX screen, namely the 320x200x256 color VGA mode popular with a number of games including Doom. PC-Task, on the other hand, allows you to set any of the many PC screens to display on your graphics card. PC-Task also allows you to promote to a benchmark window, boost for low value, if you're running a fast application that you need to keep an eye on.

Drive partitions

To set up a hard drive partition you can go one of two routes. The first is the hardfile system, even in earlier incarnations of PC-Task as well as in the Emplant Mac and ShapeShifter Macintosh emulations. This creates a large AmigaDOS file several megs in length (as big as you elect, up to a certain limit, usually around 32 megs). This is the easy way to go if you've already partitioned all of the space on your hard drives. However, it is also very slow and you'll need to allocate a significant portion of your Amiga's memory, or a hard drive buffer for the partition, to just to get acceptable performance.

On the other hand, if you've got some unallocated space on your hard drive or don't mind the effort, it will take to repartition your drive, you can assign a stand alone hard drive partition to the emulator. This allows for much faster access times from within the emulators.

Not necessary but HIGHLY recommended are either a high density floppy drive, a CD ROM drive or both. The PC software that doesn't come on high density floppies comes on CD ROM, and it's very difficult and PC-centric to install from floppies on double density these days. Whatever route you have to take, if you're serious about PC emulation you should really be armed with these two items.

What You'll Get

This is of course the tricky question. PC-Lamming you meet and hopefully exceed the minimum specifications you'll have a PC running on your Amiga with whatever amount of RAM you allocate to be ready to run your applications. A note here: PCx requires memory to come out of a contiguous block and it's this memory that you use your faster memory. In my case, this is the CyberStorm's.

You'll first want to install a DOS, which will be somewhat time consuming, not necessarily because of the speed of the emulation on your system but because reading a high density PC floppy on the Amiga is a slow proposition – already reading high density causes a 50% speed hit on the floppy drive, and the PC data reads a bit slower than Amiga data.

Once that's done, the PC world is your oyster, albeit not a 100% compatible oyster. PCx and PC-Task are not claimed to be fully com

PC emulation

To make PC emulation tolerably fast, both programs use advanced emulation methods. In PC-Task, you choose between two versions of the program: PC-Task Dynamic and PC-Task Interpretive. The latter works on older versions of the program did, taking PC instructions as they come, translating them to work on the Amiga, then translating the results back. Reliable, but slow.

Dynamic recompilation buffers a certain amount of code and changes larger chunks at a time into 68000-series code. This is faster in the long run but takes up more memory (you can assign a cache ranging from 512k in size to a large proportion of your PC system memory) and results in programs that are slower to start up (as they are cached and converted.)

PCx has two methods – a 'transcription' mode similar in concept to PC-Task's 'dynamic recompilation', but with a cache maximum of 1 meg, and a 'Turbo Level'. The Turbo option is hardly explained at all in PCx's manual, they simply tell you that setting it to '1' or '2' may get faster emulation for certain enhanced/protected mode DOS programs. (Levels 3 through 7 on the slider are not documented.)

All of this sounds wonderful, doesn't it? The bottom line is this: Yes, the transcription and Dynamic options do typically get you faster emulation, although you are notified in the manuals that it may actually slow things down. Just keep this in mind and don't be afraid to experiment.

patible with every piece of software and if you play around long enough you're sure to find some instances.

Nevertheless, you do have a number of options open to you. Windows 3.1 will install with some coaxing, and you can even get the Mother of All Utilities, Microsoft Word 6, to run on both emulators if you've got enough memory and patience.

In practice

I've found that the emulations both do a comfortable job of recreating a decent 386-class PC in terms of real world usability. 3D texture mapped games are not overly comfortable even on an 060 such as mine. However, the Bullfrog classic Populous II ran quite admirably compared to a 486/25 and Pentium 100. I've seen it on PCx's enhanced ANSI text mode means you might get some actual speed gains when running something akin to Lotus 1-2-3 for DOS, which while uncomfortable to use from a user interface standpoint, still has a very comprehensive set of statistical tools available for it.

In general, these emulators do a high spec Amiga do a good job of getting you near the speed class of a somewhat average PC of the early 90s. Once you start playing with software expecting a fast 486 you'll be sorely disappointed, and those of you with Amigas slower than fast 040s will have to similarly downgrade your expectations.

Speed benchmarking proved to be a difficult proposition. It was a challenge to find benchmarking software that would run on a real PC *and* both emulators. Benchmarks are also notoriously inaccurate when it comes to emulators, particularly those which have to emulate other processors. Most disappointing was PC Task's inability to run the BYTEmark, a respected standard (it returned values of 0 for tests.) PCx clocked in at something like 1/9 the speed of a Pentium 100, not bad, all things considered.

To form a benchmark comparison between PC Task and PCx without using one of the benchmarks recommended by a third developer, I was forced to retreat to an old and somewhat primitive benchmark known as CI 1.1. This returned results indicating that PC Task and PCx were roughly equivalent to 36.2 and 31.1 mhz 386es respectively in PC Task Dynamic and PCx with Transcription. Using PC Task Interpreter and PCx without transcription dropped each benchmark by about a factor of 5. Activating Turbo for PCx garnered a somewhat higher speed rating.

However, I prefer real-world tests. I can share my own experiences with you, displaying VGA FLI animations is slightly smoother under PC-Task while some games seem more responsive under PCx. For a quantitative measurement, I compared the time it took for PC-Task and PCx to ZIP a file, compared to a real Pentium 100. Zipping a test executable on a Pentium 100 with a high speed IDE interface took all of 1.83 seconds. PC Task Dynamic clocked in at 9.83 seconds, a respectable result by comparison. PCx on the other hand, using transcription, took 34.51 seconds, over 15x more than the Pentium and more than 3 times longer than PC Task, using the same PC configuration!

▲ You can't call yourself a true RPG player if you've never experienced the Wasteland!

Conclusion

If you set aside PC emulation with a well specced Amiga and some realistic goals in mind, both emulators will in the long run deliver for you. PC Task reflects the many years of continuous development it has had while PCx at times shows the chequered road it has travelled to get to it today. If it wasn't for PCx's shortcomings, most of which involve I/O devices, I might be able to make a recommendation in its favour but as long as PC Task continues to be the most accessible emulator in terms of user friendliness, flexibility and file sharing, I have to reserve strong judgement. ■

Jason Compton

Head to head

It's really very hard to come to a conclusion on these emulators. Not only is there such a variety of software on the PC that it defies a thorough inspection, it's not entirely clear who comes out on top here. There remain some other points and comparisons to be made though.

CD-ROM: While both offer CD-ROM support, both implementations seem to be lacking in 100% compatibility. CDs which are recognised both on real PCs and by my Amiga's CD filesystem were sometimes rejected as invalid by the emulators. PCx was the biggest offender here, choking on a number of CDs.

SOUND: Both packages offer emulation of the standard PC speaker, but PCx has gone an extra mile and implemented a partial SoundBlaster emulation. While not complete or perfect, it's enough for certain games.

MOUSE: Both emulators offer mouse emulation. PC-Task's is still the easiest to use, as it has a built-in driver. PCx leaves you to locate your own.

MANUAL: Only PC-Task comes with a printed manual. PCx has an AmigaGuide on the disk. PC-Task's is far more comprehensive, while that of PCx leaves a number of options and features poorly explained, the most notorious of which is the Turbo slider which could do anything for all we know.

FILE SHARING: Only PC-Task allows you to access the PC's drives through AmigaDOS. This can be quite useful if you're using the Amiga to download PC software and don't want to have to transfer it through PC floppies. PCx is incompatible with PC-Task's partitions, but will work with PC-Task hardfiles.

PRICE: PCx is £20 cheaper than PC-Task.

MULTI-TASKING: PCx does not allow you to run multiple simultaneous tasks of the emulation. PC-Task does.

PC TASK 4.1

A500 — [illegible] Any Amiga with AMIGA OS 2, 3 Mb RAM. Faster processor, hard drive, more memory and graphics card recommended.

A500+ — [illegible]

A600 — [illegible]

A1200 — Some applications slower, some faster, but easy to get a hold of.

A1500 — [illegible] £20 only seems like a big difference, but I think I'm right about this.

A2000 — [illegible]

A3000 — [illegible]

A4000 — [illegible]

OVERALL — Not the resounding winner, but still the better package — **89%**

PCX 1.1

A500 — [illegible] Any Amiga with AMIGA OS 2, 4 Mb RAM. Faster processor, hard drive, more memory and graph ca card recommended.

A500+ — [illegible]

A600 — [illegible] I figure they think their manual is enough. It's not.

A1200 — [illegible]

A1500 — [illegible] £20 for a PC is a good deal, but you're running out on some [illegible]

A2000 — [illegible]

A3000 — [illegible]

A4000 — [illegible]

OVERALL — It's not there yet, but PCx could be the way to go. — **86**

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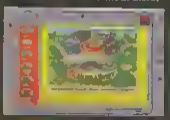

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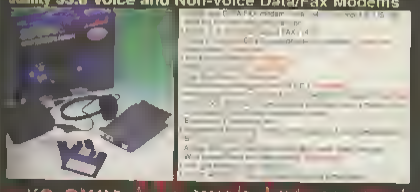

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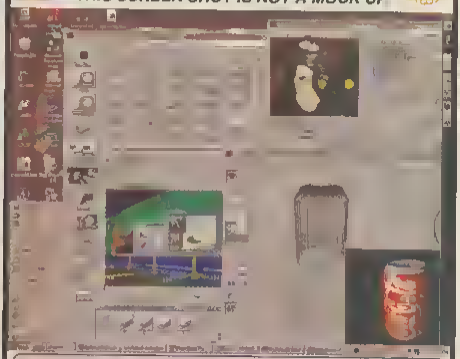

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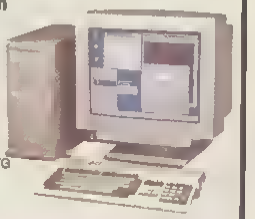

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Turbo Print 5

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■ Price: £49.95 ■ Developer: IrseeSoft ■ Supplier: Wizard Developments ✆ 01322 527800

The photo-realistic printers now available demand drivers to match, and Turbo Print is just the job.

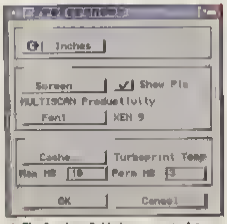
Printers are getting sexier each year goes without saying. Though the Amiga printer [illegible] continue to [illegible] publish [illegible] from [illegible] making sure [illegible] behind [illegible] output. I don't [illegible] and [illegible] tool [illegible] my PC [illegible] change that [illegible] IrseeSoft updated [illegible] drivers in version [illegible] the latest Epson [illegible] Hewlett-Packard printer.

[illegible] upgrade enhance [illegible] the Amiga one of two [illegible] being Studio II [illegible] which is now up to [illegible] 4.14. The TurboPrint [illegible] made up of three main [illegible] printer driver, the printer preferences panel and [illegible] printing applications called the Graphics Publisher.

Do you need it?

Let's look first at why you need a printing enhancement package. The printer drivers and printer preferences functions on the Amiga have not changed since the days when 4096 colours was a revolution in home computers. These days 24 bits is the norm and new printers like those from Hewlett-Packard, Epson and Canon are now capable of producing photo realistic imagery.

Unfortunately the Amiga doesn't come with printer driver that will drive these new printers. Nothing really wrong the c



▲ The Graphics Publisher supports data matching so you don't need lots of memory

because even my version of Windows 95 doesn't have the latest drivers. The difference is however that printer manufacturers just don't see the point in developing drivers for the Amiga while they do however create drivers for PC and Macintosh owners.

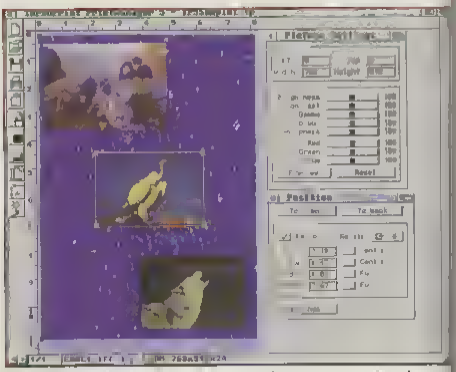
The reason is money. Only one manufacturer I know of actively develops Amiga drivers (Canon) and even then the free driver you get is not fully functioning. Also you need to get the upgrade from the author for what is not a very large sum of money (£20).

So in the main it's down to third parties like IrseeSoft to develop new printer drivers so that we can use the latest printers on our Amigas. The printer driver alone though doesn't solve the whole problem.

Turbo Prefs

Handy if and when a printer driver comes the ability to control the output and for that you need a set of preferences for changing colour balance, resolution, paper size and so on.

The standard Amiga preferences for this are nothing more than a joke. Ancient, old fashioned and definitely useless. Preferences on the Amiga also serve a printer device that is equally useless being restricted to 4096 colours or 12 bit. We need 24 bit and that's where TurboPrint comes in.



▲ The Graphics Publisher enables you to have more than one image on a piece of paper. As well as adjusting the position of the images, the colour balance can also be changed.

Why do we need 24 bit? Well let's take printing a gradient which is where most applications come undone. A gradient can have up to 256 shades of a colour but the printer device only supports 16 colours for Red, Green and Blue (16x16x16=4096). This is why the printer device is near to useless.

Unlike Studio II, which performs miracles in working with the Amiga printer device, TurboPrint comes with its own preferences serving their own 24 bit printer device. This means the program is in effect patching the system, but as it seems to work so well these days I don't think anyone really cares how it does it, so long as it comes up with the goods, which it does.

Picture Perfect

The upshot of having its own printer device is that TurboPrint can output in 24 bit from its own picture printing application (Graphics Publisher).

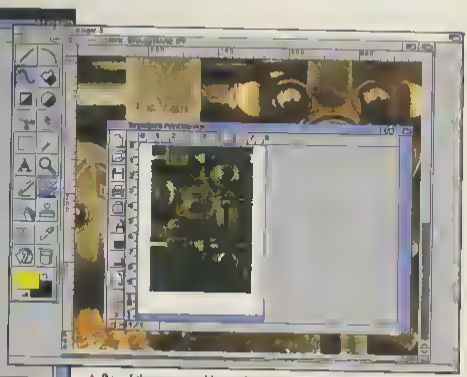
The Graphics Publisher is supplied so you can print bitmap based pictures. Basically anything you can produce will be reproduced in all its glory if you use the Graphics Publisher. This is because the Graphics Publisher is printing direct to its own printer device and is not reducing the number of printed colours, which is what most normal Amiga applications do.

What makes the Graphics Publisher different from previous

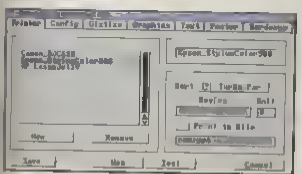
Upgrading from 4.1

We've had quite a number of people asking if it's worth upgrading from TurboPrint 4.1 to version 5. The answer depends on a number of factors which I'll outline now. Version 5 comes with new drivers and so if your printer is not yet supported in 4.1 but is in 5, then upgrade. If you print lots of pictures, and regularly have more than one on a page, then the Graphics Publisher will be very useful. Other than that, there isn't a great deal different between versions except for some tweaks here and there.

▲ Pictures in the Graphics Publisher can be cropped like this and then resized.



▲ One of the programs I know that supports TurboPrint 5 is Art Effect from Haage & Partner



▲ If like me you have more than one printer, you can have a number configured and ready to use

versions (in Turbo Print 4 for example) is that you can now place more than one image on your paper and print them all at once. Previously with the Print Manager you had to print one image and then if you wanted another on the same piece of paper feed the paper through again. Now it can all be done in the one go. You can even crop images in the Graphics Publisher. This makes the Graphics Publisher very important to those who want to produce images with lots of colours (such as gradients and so on) because these types of images can not be printed very well from most Amiga applications. The exceptions are newer and more advanced applications like Art Effect that can be made to print directly to Turbo Print 5 (or in the case of PageStream 3 and ImageFX Studio II Professional).

Colour Reduction

Which leads me to Printer Preferences and why you don't get the same quality from a normal Amiga application that you do if you print the same image from Turbo Print's Graphic Publisher. Unlike the PC or Macintosh where it doesn't matter what application you print from, on the Amiga if you have a page which is graphics intensive the best results are produced when the page is printed in 24-bit.

Most Amiga applications have only ever known a 12 bit printer device and so when the page is printed the number of colours is reduced with some applications dithering to hide the colour reduction. In the main however if you print a gradient from Final Writer or Wordworth (or from many other applications) it will come out contoured (visible steps between colours) while if you do the same thing in Graphics Publisher it will print with smooth graduations.

This is why TurboPrint 5 is so important because it gives you the ability to not only drive your modern printer but also gives you two options for output: one from your normal application where the quality is much improved over what it would be without Turbo Print 5 (but still not perfect because of the application not Turbo Print) and for optimum quality you have the Graphics Publisher.

What's encouraging is that more and more programs are starting to directly support one or both printing enhancement packages as well as the normal Amiga preferences. I know for example from discussions with the authors that DrawStudio will have 24 bit printing in its next version while Photogenics 2 and Art Effect already do.

Which leaves me to urge anyone who is buying a new printer to buy either TurboPrint 5 or Studio II. Of the two, my own view is that Turbo Print is easier to use, a view reflected by many CU Amiga readers. Whether it's changing the dither, the colour balance, or the position of an image on your paper, using Turbo Print is very intuitive.

It's also very quick. A full A4 page printed at 720 dpi (Stylus 600) from a 68060 Amiga took only six minutes, slightly longer than it took from a PC. Combine this with a new inkjet and you'll be in heaven. ■

Larry Hickmott

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Fujitsu DL-100

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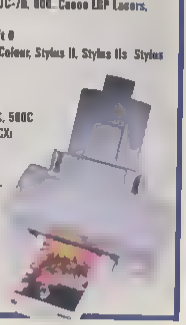

TURBO PRINT 5

System requirements
Workbench 2.04 or higher, hard drive recommended

A600 — Curious mode is very part unusual but I found it didn't need it. Very intuitive

A1200 — Very quick. Speed depends on printer and Amiga processor. Turbo Print 5 is also packed with useful features.

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G[illegible] [illegible] LAND Brilliant game similar to ZOOL (not A1200)
G[illegible] [illegible] C64 games with update Amiga graphic
G[illegible] DELUXE GALAGA V2.6 Their Very Latest Galaga. Recommend
G[illegible] [illegible] RACE Good Tron type extremely addicted to play
G[illegible] TRAIN DRIVER SIMULATION The most [illegible] train sim
G[illegible] MONSTER BLASTER Kill various monsters with bombs
G[illegible] KNOCK OUT Mini destruction derby very addictive
G[illegible] [illegible] HERO 3D Graphic adventure similar to DOOM
G[illegible] [illegible] KUMQUAT 3 Weird but fun beat-em up
G[illegible] CODE NAME NANO Superb Thrust clone (NANO FLY)
G[illegible] [illegible] MARKET V2 Get rich by buying shares. Great games
G[illegible] POKER MANIA [illegible] poker [illegible]
G[illegible] [illegible] FORMULA Adventure similar to Monkey Island
E[illegible] [illegible] TYPING TUTOR
E[illegible] [illegible] PUZZLE PRO Create Crossword puzzle or [illegible]
E[illegible] [illegible] Another very fine education program
E[illegible] [illegible] LEARNER [illegible]
E[illegible] [illegible] OF THE WORLD
E[illegible] [illegible]
E[illegible] [illegible] WALES SCOTLAND & NORTHERN IRELAND
E[illegible] [illegible] ELECTRONICS [illegible]
E[illegible] [illegible] GUIDE TO THE INTERNET
[illegible]
U[illegible] VIRUS CHECKER V8.2 [illegible] WB 2-3 [illegible]

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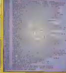

LITTLE OFFICE 2

[illegible]
COMPATIBLE WITH ALL AMIGA

Hard drive & disk drive space doubler

[illegible]

18 DEMOS

MUST BE 18 OR OVER

X69	CINDY CRAWFORD (2)
X74	MADONNA (SEX) (3)
X81	SHOWER GIRL
X83	BODY TALK (8)
X08	MARIE WHITTAKER
X24	SABRINA SPECIAL
X25	DIB FILKINGER
X26	MADONNA EARLY DAY
X28	KATHY LLOYD
X30	MEGA-MAID
X31	CALENDER GIRL
X32	MAY FAIR
X33	UTOPIA (4 DISK)
X44	GIRLS OF SPORT
X45	PAGE 3 GIRL
X70	GON GON GIRL
X71	TINA SMALL(hs)
X81	CINDY CALENDAR 95
X96	HOT BABE 1
X97	HOT BABE 2
X98	HOT BABE 3
X99	HOT BABE 4
X100	HOT BABE 5
X101	BIG GIRL II
X102	FEMALE BODY BUILDER
X103	GIRLS GIRLS
X105	ELLE MACPHERSON
X106	CLAUDIA SCHIFFER

HARDWARE PROJECT III

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Picasso IV

▲ Image loaded Picasso IV in all its Zorro III slot glory

■ Price: £299 ■ Developer: Villagetronic ■ http://www.villagetronic.com
■ Supplier: Olittersoft ✆ 01900 261466 ■ http://hlittersoft.wildnet.co.uk

CybarViaion may hava atolan ita thunder, but the Picasso IV graphica card could well be the best ever.

The Amiga's most popular Zorro II graphics card must surely have been Villagetronic's Picasso II, the success that it enjoyed helped started the market for third party graphics cards for the Amiga. Like other cards of the era such as the Retina and GVP Spectrum, it was based on the PC SVGA Cirrus Logic 5426 chip. After a long break from Amiga development, Villagetronic have finally unveiled the successor in the form of the Picasso IV.

There are quite a few major additions to the Picasso IV functionality wise. Firstly, it is a dual Zorro II and III architecture card. That means it is significantly faster on A3000 and A4000 machines but still works in the A1500 and A2000. Probably the most impressive feature, however, is the addition of a flicker fixer into the design as standard. Since the Picasso IV requires a video slot in an A3000/4000, there's no extra loop through cables. It's just plug in, connect to any SVGA monitor and absolutely every Amiga display mode from the new Picasso modes to the most hack some AMOS hardware banging game will display perfectly.

Flicker fixing

The flicker fixer negates the need for a multiscan monitor. The A2000 flicker fixer requires a video slot in the wide A2000 slot but Villagetronic have come up with a unique solution. The PCB around the video connector is perforated. That means you can actually snap off the required of PCB and place it into the video slot. The jumpers provided then connect with cables to reunite the video slot to the Picasso IV. Scary stuff but it actually works provided you be careful.

Physically the card is far busier with siliconthan Phase 5's much smaller and less populated Cybervision 3D. It's also bristling with jumpers and feature connectors. A new Pablo video encoder is planned for the card as is an MPEG decoder board. These additions would be fantastic if they arrive but from past experience manufacturers rarely see it as worthwhile to release them.

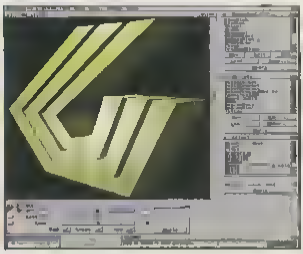
You don't stick a £300 card in an Amiga for a flicker fixer alone. What we really want is the new high resolution and high speed display and it's in this area that the Picasso IV excels. Opting to stay with the Cirrus range rather than the S3 VIRGE chip set as used on the Cybervision 3D, a much later 64-bit 5446 is used for the Picasso IV. Coupled with 4Mb of EDO (Extended Data Out) RAM as standard, the Picasso IV is quite capable of driving absolutely outrageous resolutions up to 1600 x 1200 pixels in 16-bit (65 536 colours). Whether your monitor can handle that is another issue, but it gives you one hell of a display that just doesn't compared to AGA modes.

Scan rate

Sadly, even the Picasso II's older chip set shows up AGA for computer displays (rather than video). An 800 x 600 256 colour screen zips about, faster than a much smaller and less colourful AGA screen. You also have the luxury of not tying up the Amiga's custom chip set DMA with Multiscan Productivity or DBLPal, slowing everything to a crawl. A much underrated boon of a graphics card is an increase in the scan rate. Flicker lessens and eye fatigue is reduced. Take it from someone who works in front of computer all day: the Amiga's 50Hz is NOT good for thrs.

The Picasso IV's display is more of the same but better. It's so much faster that even an old graphics board crony would find it a massive improvement over the older non-64 bit generation. It's even faster than the older card's 8-bit modes while in 24-bit

▲ Workbench in 1024 x 768 allows far more windows and activity on the screen than ordinarily possible. It's a lot faster than AGA too



▲ Image Studio is happy to run on a truecolour screen so that the previews aren't limited to 256 colours

▲ You can't beat Shapeshifter running at 1024 x 768. A colour display is barely practical with Mac emulation unless you have a graphics board. The Picasso IV is just the ticket.

Benchmarks

800 x 600 pixel 256 colour screen

Test	CV3D	Picasso IV	Winner
Put Pixels	2684177	1185250	2.23 CV3D
Draw Lines	142294	27505	5.17 CV3D
Draw Hor/Ver	208455	267704	1.28 PIV
Draw Circles	86498	102269	1.18 PIV
Draw Ellipse	79692	79515	Even
Draw Boxes	7012	13481	1.92 PIV
Scroll X	1309	2415	1.85 PIV
Scroll Y	1288	2328	1.79 PIV
Print Text	48270	27256	1.77 CV3D
CON Output	739	1371	1.85 PIV
Open Windows	274	305	1.11 PIV
Size Windows	530	560	1.05 PIV
Move Windows	67	123	1.83 PIV
Swap Screens	46	592	12.5 PIV
Areafill	29500	520	56.7 CV3D

The results are extremely interesting. In most tests the Picasso IV and Picasso 96 software combination were an average of 35% faster. However the CyberVision 3D/CyberGraphX3 combination shows impressive accelerated Draw Lines and Put Pixels performance with astounding Areafill results. The Picasso IV was far faster for screenswaps. In general use, the Picasso IV subjectively felt a bit faster but in reality, fast is fast.

Intended to use 16-bit displays which are outrageously quick but so colourful as to be nearly indistinguishable from 24-bit.

It's about now that we get into the real crux of the matter when running a graphics card: the all important RTG (ReTargetable Graphics) software which wedges into the Amiga's operating system to add new screenmodes and to redirect graphics onto the new card. For a long time the standard was Phase 5's CyberGraphX RTG software, the most strongly developed RTG software with drivers for cards provided with lesser RTG software. It's been so popular that it is more or less an RTG standard for the Amiga which makes it such a surprise that Villagetronic decided to go it alone.

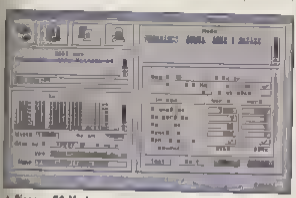
Picasso 96

The software provided is known as Picasso 96. Our first access is for the situation with Amiga software. It sports a high degree of compatibility with CyberGraphX software, so much so that the bulk of the CyberGraphX software I use from day to day functioned perfectly (ImageFX, Image Studio, Voyager NG, IBrowse, Cybershow/grab etc). It isn't just compatible, it's actually better in many respects. It astounds me that it seems virtually bug-free given the hideous state of Phase 5's CyberGraphX 3 re-write when we looked at the CyberVision 3D a couple of months back.

What's more, my major complaints about CyberGraphX have been addressed in Picasso 96. The screenmode editor, called Picasso 96 Mode, is a case study in what such a tool should look like, unlike the amateur effort in CyberGraphX. There's also the matter of screen swapping. Unlike the Amiga's native chip set, swapping screens doesn't just require changing a pointer to somewhere else in memory. You have to shove all the entire display in and out of the card. Perhaps it's also due to up-spec hardware but screen changes happen in a fraction of a second and not two whole seconds like my GVP Spectrum. It's worth noting that CyberGraphX 3 was also much quicker on the CyberVision 3D but nowhere near the Picasso IV's swap rate.

There were some minor problems though. Some old software like Iconian crashed with no explanation although it was fine on CyberGraphX. Cygnus Ed, the famous text editor, didn't erase block marked text, rendering the package quite frustrating to use. PowerSnap refused to work at all. Otherwise everything was perfect but I'm sure other glitches will appear.

It was dubious whether a newcomer could appear onto the market to usurp CyberGraphX but Picasso 96 appears to have done just that. The CyberGraphX authors totally re-wrote the software introducing a lot more bugs. Seemingly the only reason for this was to implement the OpenGL standard to show off the 3D capabilities of the CyberVision 3D. There's also rumours of a low level backdoor in Picasso 96 which will allow ultra-high speed access to the hardware for emulation software such as the forthcoming Fusion Macintosh emulator.



▲ Picasso 96 Mode: an improvement over CyberGraphX Mode to say the least. Now why aren't they all this good?

Picasso IV card

I'm pretty impressed with the Picasso IV card: the combination of very nice and fast hardware and excellent software make it a fantastic option for any Zorroed up Amiga. There really is nothing like a graphics board to drive lovely high resolution, high colour screens for the wealth of top notch Amiga graphics applications. The Picasso IV's faultless flicker fixer ensures that naughty applications and games won't be left in the dark on your brand new 17" SVGA monitor.

The Picasso IV sports some other neat features like the S-Video ports and audio In/Out 3.5mm minijacks. The great thing about this is that audio can be input to the Picasso to be mixed with the Amigas standard audio. There's a little utility provided to switch the inputs as needs be. Passing the output of a third party 16-bit sound card into the Picasso IV also would be a great idea.

The Picasso IV's electronically PCI compatible expansion connectors promise MPEG decoders, video in a window and video PAL encoder modules for the future. It's that simple: if you've got a Zorroed Amiga and you're serious about your computing, get a Picasso IV. ■

Mat Bettinson

PICASSO IV

A500 System requirements: Any Amiga with Zorro II or III slots.

A500+

A600 Good easy hardware and software installation.

A1200 Blinding video performance and a flicker free to boot.

A1500 It's expensive, but you get a lot.

A2000

A3000 OVERALL: Quite simply the God of graphics cards. **94%**

A4000

Continued overleaf ▶▶▶

A new look at Cybervision 3D

Time for a second look at the new improved CyberVision 3D graphics card from Phase 5.

▲ Here's Nelson Christensen casting an eye over Quirvis, CGraphX's MPEG player.

■ Some here [illegible] the cat away [illegible] section where [illegible] the add-on scan [illegible] doubler fits.

Review of Phase 5's Cybervision 3D graphics card created quite a stir. Opinions ranged from those totally unhappy with the card to those who thought it was the best thing since sliced bread. The fact is, although at the time every effort was made to sort out some of the problems the product simply wasn't to our satisfaction.

However, since then the CyberGraphX V3 software has improved no end. Many of the previous incompatibilities have gone away and performance in some areas has improved also. It's now back up to the same high standard as the previous CyberGraphX version 2. Unfortunately the 800 x 600 16-bit bug still plagued the CV3D. We have yet to have it confirmed but it seems this is a hardware bug of the ViRGE chipset itself.

No 16-bit

Oddly the 3D ViRGE demos run in 16-bit and obviously they work on a lot of configurations out there. They don't work for us. We even tried tweaking the screen mode scan rates significantly in all areas but still the CV3D output nothing but a black screen. This is a singularly annoying feature since we find 800 x 600 16-bit is the most useful screen mode for a 17" monitor.

We re installed the software from scratch on another machine installed the latest update but still the problem would not go away. As such we advise that you request the right to return the CV3D if this screenmode does not work for you.

Previously the screenmode editor software, which has been improved slightly since we reviewed the package, placed restrictions on the scan rates and pixel clock that could be set on the CV3D. These were taken directly from the S3 ViRGE specifications. Now Phase 5 have given CGXMode the capability to enter an advanced mode so that these limitations aren't there. It rapidly becomes apparent that the ViRGE can do more than the specs very useful for defining an 800 x 600 24-bit screen in a good 70Hz refresh rate, unlike the flickery 50Hz default.

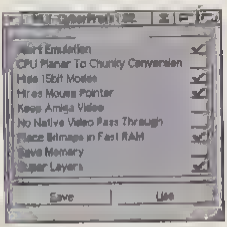
Price reduction

Also big news on the CV3D front is the massive reduction in price in the UK. Phase 5 will have set up another UK distributor by the time you read this. Wolf Dietrich of Phase 5 assured us that the price of the CV3D should be around £175. Even with the separate scan doubler at £75, the combo will sell for some £50 cheaper than the Picasso IV.

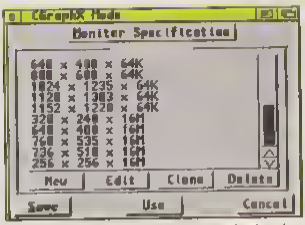
The support software with the CV3D has improved also with the promised OpenGL 3D library system having been completed and included with the new software. It remains to be seen if third party developers take up the ball with OpenGL on the Amiga. If so this could be the beginning of an Amiga 3D standard so that the Amiga can benefit from 3D hardware acceleration for games and applications alike. Only Phase 5 seem to have given this aspect any thought whatsoever, let alone [illegible] rely develop a 3D library. Forms of OpenGL applications on other platforms are a distinct possibility. There's now another software MPEG player provided also. It seemed identical to the last one minus the bugs to us. Good news.

With fixed software, extra support material and a price reduction on the Cybervision 3D, the Picasso IV doesn't have the edge that it would if compared to the initial CV3D release. The Cybervision 3D is an excellent fast graphics card with high quality software support. This makes it excellent value for money and I can now recommend it most highly. ■

Matt Bettinson



▲ Nice MUI front end for CyberGraphX performance



▲ CGraphX Mode: the rather basic screen mode editor that CyberGraphX relies upon

Netconnect

■ Price: £59.95 ■ Developer: Vaporware ■ Supplier: Active Software ✆ 01325 352260

Could Netconnect be the complete Internet software solution you've been waiting for?

It's about time someone put together a commercial Internet package consisting of all the best registered shareware. The Netconnect package has been a long time coming. Has it been worth the wait?

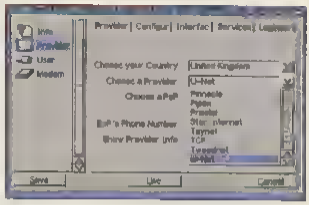
Netconnect may as well read Vaporconnect since virtually all of the software is from the Vaporware camp. Vaporware software is overwhelmingly programmed by the German Oliver Wagner. I've long been a fan of Oliver's software so I was quite excited at the proposition of all of the best works presented in registered form. His Internet shareware has been extremely popular among Amiga net heads.

MUI dependant

Firstly, there's bound to be those with reservations: what with all of the Vaporware software requiring Magic User Interface. It's people will be sceptical as when running a suite of MUI software the GUI library system actually gets more efficient since all of the packages use the same GUI code in memory. We won't go into the pros and cons of MUI here but suffice to say Netconnect comes bundled with an unregistered version of MUI 3.8. The applications are all either the best or among the best that are available.

First thing you notice is that the CD is Magic Workbenched which mildly annoys me as I don't use the MWB icon palette so the icons look hideous. Activating the installer requests a hard drive location with 9Mb of free space. Wow, try fitting a PC Internet suite in 9Mb! As the installer proceeded to copy the package to hard drive, it oddly requested to check each country for which data is of the Internet Service Providers (ISPs) will be copied. Never mind when finished the all new AmiTCP 4.5 GUI config program appeared.

You heard right. AmiTCP 4.5 is bundled and it actually has a GUI config now, no more editing of endless text files! I was instantly impressed as the package knew about most of the UK's ISPs and even their various Point Of Presence (POP) telephone numbers! In a jiffy I'd filled out the essential details for one of our accounts (username, password, full name etc) set up the modem to use my serial card and Bob's your uncle!



▲ The new GUI preferences for AmiTCP. A vast improvement on the former configuration method

AmiTCP 4.5

After a quick reboot and an Internet Dock bar with MWB style buttons appears. It's even configurable so you can add/delete and edit the buttons! It's also a MUI Dock bar so it can be snapshotted anywhere on the screen. Press the plug and socket type button to start AmiTCP 4.5 and the dial up proceedure gets underway in a terminal window. Sadly it failed to connect for me and no error was reported other than AmiTCP exiting quietly. Charming. Turns out I needed to turn off header compression but there was no indication why.

The rest of the Dock buttons launch the major applications provided which are: Voyager-NG for WWW browsing, AmiRC for IRC real time chatting, AmiFTP for FTP downloading of files, AmiTelnet for telnetting into remote servers and a few more valuable utilities. MicroDot II is provided to handle the E mail and News situation. It's shaping up to be a fantastic package and it was this area of Netconnect that caused the delays. It definitely needs more work so it's just as well that Active Software provide software updates.

In fact support for the package's quite impressive. It has its own web site and E mail mailing list for support and announcements etc. It's a great collection of some of the best software as it is but with updates promised in the slightly weaker areas, things look extremely good for Netconnect. My only reservation is that while AmiTCP 4.5 is a fantastic improvement, it's still not as user friendly as Miami. For one thing I would have liked to have seen better error reporting in particular.

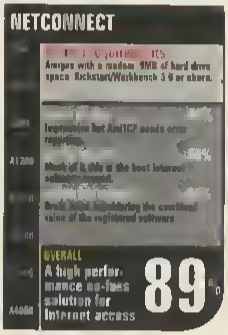
Professional

Unfortunately the provided software will not run under Miami only working with the AmiTCP 4.5 provided. Active Software tell me this will change in the future. All in all, it's a professionally put together package with tickets of support [illegible] all goes towards making this the best beginners all in one Internet suite around at the moment. ■

Mat Bettinson

▲ Another GUI configuration but this one for the Internet Dock bar seen below

▲ Appearing at boot up, the Internet Dock bar fires up AmiTCP and activates the major clients. Handy



Catweasel

■ Price: £59.95 ■ Supplier: Blittersoft ✆ 01908 261466

Catweasel offers a solution to the problem of the Amiga's outdated double density drives.

One of the weak points of the Amiga is its floppy drives. The Amiga has stuck with [illegible] DD drives storing [illegible] per disk when [illegible] in the world has moved to HD (high density) not [illegible] disks. Normally this isn't a huge problem, after all you really only need to use two disks, but it's [illegible] and more difficult to buy DD disks these days. Although some companies have developed HD drives for the Amiga, they cost four times as much as similar PC drives and are very slow.

Catweasel, the odd L-shaped board with the cat's tail on the chip, offers a unique solution to this problem. The Catweasel slots rather neatly over the IDE connector on the motherboard. There is a through connector on the Catweasel for hard drives to be connected undisturbed, but it is necessary to remove the top of the Amiga's RF Shield to fit it. A cable stretches out the side of the A1200 case, or if you have a tower, off the bottom of the motherboard, and can be connected to a couple of 3.5 or 5.25 type drives. Software installation is simple – just click on the install icon, tell it what you've plugged in and off it goes.

The beauty of Catweasel is that it is a very flexible floppy drive. By choosing one of the provided mountlists you can connect drives configured as Amiga HD or DD, PC HD or DD, and even old Commodore 1541 drives as used with the Commodore 64. ShapeShifter 2.7 onwards support the multidisk device. There is even a utility to allow you to boot from a Catweasel drive.

The flexibility Catweasel gives you is unparalleled. A Catweasel plus PC HD drive costs only a little more than an Amiga HD [illegible] set up is a lot faster. A handy little work around. ■

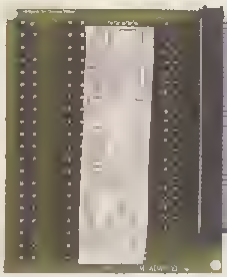
Andrew Korn

88%

Eyetech Buffered IDE Splitter

■ Price: £39.95 ■ Supplier: Eyetech ✆ 01642 713185

This new interface from Eyetech takes four IDE devices and claims to save your Amiga from certain doom.



The IDE interface inside the Amiga 600s and 1200s [illegible] designed with a [illegible] 2.5" hard drive in mind. Fast forward to this, looks like a pot [illegible] but we are stuck with it. A simple step up cable will allow the 44 pin connector on the Amiga motherboard to be used as if it were a standard 40 pin connector. This neat little circuit board from Eyetech promises a rather more polished solution to the problem.

The Eyetech board slots neatly inside the Amiga's case and is connected to the motherboard via a short 44 pin connector. Installation is very easy with a sticker on the board making it perfectly clear which way around cables fit. On the other end of the board there are two IDE connectors. Two separate IDE channels can be connected to these, each supporting one device configured as master, one as slave. This requires software which supports two channels. ATAPI PIO and ASIMCDFS both do the job but neither are included with the board.

The big selling point for this board is that it is buffered. This means that the devices plugged into it do not connect directly with the CPU. Eyetech make a big thing about this, warning that without such a buffer your CPU is in great danger. A number of companies who sell unbuffered connectors have told us that Eyetech's warnings have worried a lot of their customers, they say unnecessarily. In our tests the unbuffered connector is perfectly capable of supporting a half meter cable with two devices on it without any reliability problems, one office A1200 system has run this way for years. On a longer cable there were problems with read reliability and fitting the Eyetech device seemed to remove this. We have yet to actually hear of anyone damaging their CPU the way Eyetech describe, but the buffered device gives an assurance of reliability and allows longer cables to be used in tower set ups. Pay your money and take your choice. ■

Andrew Korn

88%

MakeCD 2.2

AMIGA SUPERSTAR

■ Price: £30-£120 ■ Developer: Angela Schmidt and Patrick Dhley ■ Supplier: CUCD11

Now that CD cutters ara finally a realistic option, Amiga CD burning software is starting to hot up.

There s been l tt le n the shareware domain to master and cut record able gold CDR disks on the A ga There s Burn It which we ll look at next month and this newcomer from Germany called MakeCD There s also the expensive and faithful MasterISO from Asimware but if you re looking to buy a cheap CD cutter to make some gold disks on an amateur basis MakeCD s the r ght price

Neat interface

[illegible] MasterISO MakeCD [illegible] Tool Library [illegible] but a [illegible] Alt [illegible] interface [illegible] but almost [illegible] log cat [illegible] MUI style help [illegible] usefully appears over each gadget as the mouse hovers over it Luckily this can be turned off

The main page shows a list of tracks As soon as one is added the Source and Target sections become active It s here that a buds nest of configuration options h de The Track type can be data digital audio or the lesser used XA style tracks used for PhotoCDs and such like The Source can either be read from an image file on a hard drive or in the case of a data track taken directly from the Amiga filing system That s right this is the only CD mastering package that does n t need to build a temporary file first it can master on the fly to a CD writer This is a great saving of time and disk space f your machine s fast enough to handle it as it removes the need for a spare 700Mb scratch pad

MakeCD can even copy a track off another (supported) SCSI CD ROM directly to the target The target can also be set as either a temporary file a spooling style device such as a tape backup or the obvious direct to a CD writer This s a highly flexible approach

Impressive features

MakeCD s [illegible] list s [illegible] when it comes to building ISO images also ISO 9660 is the standard CD ROM filing system However this standard only handles upper case filenames and has some other s ty restrictions useless for Amigas Luckily there s RockRidge extensions which record the extra information MakeCD has a mass of options in this regard and can be confusing in this area The documentation isn t 100% on these aspects and needs to be improved

It s possible to generate virtually any k nd of ISO image The danger is that you may run into bugs in the Commodore filing system like we did with CUCD10 CDs mastered with MakeCD can record Am ga specif c details such as the script and pure file flags You will need a modern CD filing system such as the PD AmiCDFS to read them though

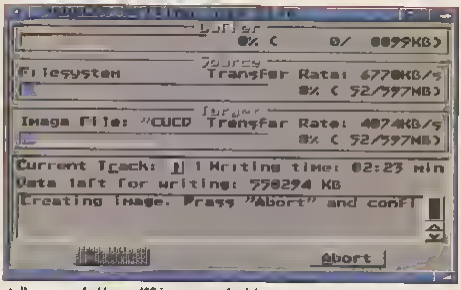
MakeCD uses a superb modular approach to provide the functions for building ISO images and the drivers for various CD writers on the market A driver could s mply be dropped in and suddenly the package will support that writer MakeCD 2 2 supports many of the big boys of the CD writer scene and the authors have a pro-active policy of generating drivers for more You might like to check the compatibility guide in the MakeCD directory on this month s cover CD

A key factor in writing CDs is performance of your Amiga The CPU power and speed of the SCSI system are very important but things like reading/writing from different interfaces can help matters Unlike MasterISO the MakeCD authors don t guarantee a limited set of systems Instead they ve shown which systems are reported to have worked and which ones have not Again see the compatibility guide Generally it s highly efficient but not to the level of MasterISO

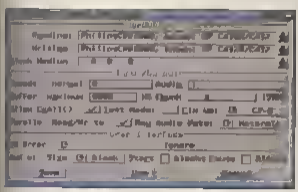
Good value

All up MakeCD 2 2 is an extremely professional package with a very sensible approach to pricing For the ability to [illegible] CDs which aren't going to be published the fee is a highly reasonable 75DM or around £30 a total steal for a package of this quality If you want to enter the professional arena the cost is 300DM or around £120 still excellent value for money Go and check it out for yourself now it s on the CD! ■

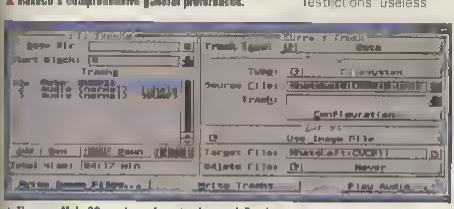
Mat Bettinson



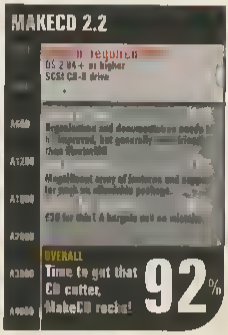
▲ Here we are building an ISO image onto a hard drive.



▲ MakeCD s comprehensive general preferences.



▲ The main MakeCD window where tracks are defined



PD Scene

The thriving PD scene has thrown up soms gems this month. Andrew Korn is your guids to snothsr bstch of goodiss.

★★★★★	Totelly blinding
★★★★☆	Good
★★★☆☆	Averege
★★☆☆☆	Substandard
★☆☆☆☆	Oh deer

Braindead

Doom clone

■ **Available from:** Online PD, 1 The Cloisters, Hillsall Lane, Formby, Liverpool L37 3PX

■ **Tel:** 01704 834335

■ **Price:** 75p per disk and 75p P&P per order

One of the more technically impressive Doom clones to turn up on the Amiga, this Polish effort is notable particularly for the digitised character graphics and because it's the only Doom clone, as far as I know, which allows the player to put the boot in.

The basic gameplay is very Doom-like. You select a variety of weapons that you find around the arena, but if that chainsaw just isn't cutting the mustard (or rather the bad guys) then hit the Alt key and your steel toe capped boot strikes out with chilling force. As all the enemies appear to be leather jacketed skin head thugs, this all appears pretty appropriate.

I don't know if there is a plot behind this or not, for all I know you are meant to be a footie hooligan whose team is playing away in some kind of weird high tech mediaeval amalgam world, but plot really isn't important in this sort of game, what you need to know is how it plays.

In game terms there isn't much to do in Braindead yet, just wander around looking at some pretty samey backgrounds kicking and punching people or cutting them up with the amazing no blood chainsaw, but technically this is a beauty. It runs on an unexpanded A1200, but gives it a bit of CPU power and it runs along very nicely. The Polish programming team behind Braindead intend to produce a commercial release soon. We will keep you informed. ★★★★☆

Charlie Cat Quickie v3

Cartoon

■ **Available from:** Roberta Smith PD, 190 Falloden Way, Hampstead Garden Suburb, London NW11 6JE

■ **Tel:** 0181 455 1628

■ **Price:** £1.50 for 2 disks, plus 50p P&P

The latest short from Anthony Whittaker comes to us after a fairly long gap. Being a quickie, this two disk animation will run in just 1.5Mb, which given that it's long enough to contain a plot, is not a lot. Anthony Whittaker uses Movesetter, the software popularised by Amiga legend Eric Schwarz, to produce his professional looking animations.

Charlie Cat cartoons, like those of Schwarz, are very much in the vein of the Warner brothers classics. There is a fairly standard cat and dog chase scenario in this one, the twist here being the introduction of a ninja feline. No more plot details to spoil it for you. If you like Amiga cartoons, get it. ★★★★☆

The Sun

Weird puzzle game

■ **Available from:** aXS Software, 55a Ivyshead Rd, Shepshed, Leics, LE12 9EP

■ **Price:** £2

According to Robert Bauval and Graham Hancock, the Sphinx at Giza holds a secret wisdom which can be uncovered by those who understand the sun's process onal cycle. The near incomprehensible cover letter suggests that the authors have cracked this secret and this game was the result. It will come as something of a surprise to Egyptologists to learn that the god Thoth programmed in Amos.

Every now and then a game comes along which just oozes originality. The first time you played Tetris, Lemmings or Populous, you knew you were playing something new. I'll be pretty surprised if The Sun becomes the new Tetris, but the comparison is a good one. The Sun owes little to any other game I've played, a touch of E-Motion maybe, and a hint of "Simon" games, and gives you that sense that you're getting better each time you play, making it difficult to stop.

You play the part of a sun, orbited by eight icons, or glyphs, which slowly close in on you. As they close in, the sun is drawn towards the horizon, the game ending when it sets. By shooting the glyphs, you can cycle the images, the challenge being to match the glyphs to a target glyph and then shoot it again to score and raise the sun a little. Shooting the highlighted glyphs leads to bonus points. It's a bit like Tempest in 2D. Less complex than it sounds. The game can also be played as a one or two player challenge, the winner being the first to raise the sun above a bar, the vault of the heavens.

From the wobbly, scratchy, black and white title page to the music which resembles a trance remix of Madness' "Night Boat to Cairo" to the psychedelically bright game graphics and bouncy effects, The Sun follows a clear design logic and a manic sensibility more than reminiscent of Jeff Minter. Brilliant. ★★★★★

Game of the Month

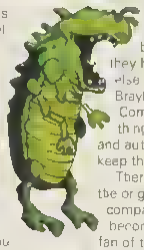
Astrokid

Multi-genre game

■ **Available from:** Arrow PD PO Box 7 [illegible] er Kent CT15 4AP

■ **Tel** 01304 832 344

■ **Price:** £4 99 plus 70p P&P



This licenseware megagame sends you on a six level quest each level being a different game You start flying through space shooting meteorites mines and spaceships from a fixed first person perspective an idea which started with Star Raider and lives on today even on the latest console games Following this you steer your damaged ship to a difficult landing fly through caverns solve puzzles and shoot big scary monsters

Look at the screenshots and you will see that this is a game which oozes graphical quality It is a pity that the gameplay just does n't match up The individual games are all based on stock genres the like of which we've all seen before and the multiplicity of levels means that they aren't particularly well implemented examples of their type

This is the kind of game that keeps you [illegible] because of the lovely graphics and variation of gameplay but once you've seen all the levels you won't play it again As freeware it would be great but as licenseware the lack of gameplay bites ★★★

Ampu

Worms clone

■ **Available from** Online PD 1 The Cloisters Halsall Lane Formby Liverpool L37 3PX

■ **Tel** 01704 834335

■ **Price** 75p per disk and 75p P&P per order

There have been a few Worms clones knocking around since Team 17 released their masterpiece but on the whole they offer nothing new Ampu breaks the mould by actually doing some things the original doesn't

Graphically the game is pretty nice The gremlin like antagonists aren't up to Team 17 standards but they are animated properly which is more than can be said for many competitors The armoury while lacking the humour of Worms DC contains some genuinely fun new weapons such as the freeze which imprisons the worm I mean player in a block of ice and jetpack which allows you to rocket dangerously around the screen

Ideally clones should do something new and this is the first of the Worms clones I've played which actually does offer some attractions that can't be found in the original Not a bad effort in all ★★★★

Torque

Uridium clone

■ **Available from:** Online PD [illegible] The Cloisters Halsall Lane Formby Liverpool L37 [illegible]

■ **Tel** 01704 834335

■ **Price:** 75p per disk and 75p P&P per order

Torque of the devil (sorry!) and another clone comes along Just because a bunch of scientist announce they have cloned Dolly the sheep everyone else wants to get in on the act Andy Braybrook's fast scrolling all action classic Commodore 64 blaster is just the kind of thing nostalgia freaks want to see again and author Shoah has come up with this to keep them happy

There isn't the smoothness of gameplay of the original and the graphics don't really compare to the flashy ray traced objects becoming so popular today but if you're a fan of the original then snap it up ★★★

Destructive Poker

Card game

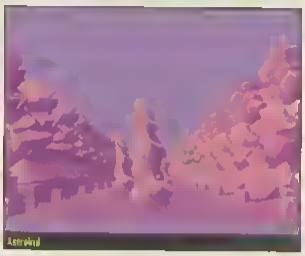
■ **Available from** Classic Amiga PD [illegible] 11 Deansgate Radcliffe Manchester M26 2SH

■ **Tel** 0161 7231838

■ **Price** £1 per disk and 75p P&P per order

The irrelevantly named destructive poker [illegible] on poker [illegible] points [illegible] than the standard [illegible] ndike formula The game is simple you are dealt five cards some of [illegible] you can change the aim being to get a hand worth as many points as possible By raising the ante for each hand you can buy yourself extra card changes and just to make things more fun you can have a variable number of jokers in the game too A double or nothing option is given to you after every win

Destructive poker is simple well presented with the now obligatory interchangeable card sets It won't set the world alight but if that's what you're after you'd better swot up on fuses on condenser reactors instead ★★★



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PD Utilities

A varied selection of tools, reference material and educational disks are put on trial this month by Andrew Korn.

★★★★★	**Totally blinding**
★★★★	**Good**
★★★	**Average**
★★	**Substandard**
★	**Oh dear**

Learn the Klingon Language

Educational (?!)

■ **Available from** Online PD, 1 The Cloisters, Halsall Lane, Formby, Liverpool L37 3PX

■ **Tel:** 01704 834335

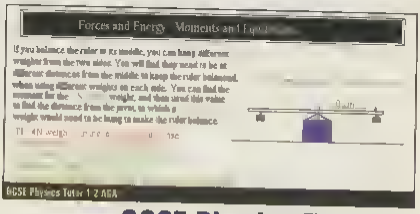
■ **Price:** 75p per disk and 75p P&P per order

Thingon jol dajatlh o ? (I'll the answer to that question is, hlja' then you don't need this disk because you speak Klingon already, in which case go straight to the bottom of the class. The AmigaGuide tutorial to Klingon has the strange grace of not taking itself too seriously. There's a pronunciation guide, a short list of useful phrases and just enough verbs and nouns to allow you to yell: he's behind you' at the screen next time you watch that girl Spock sneak up to the Klingon guard with Vulcan nerve pinches on his mind. There are also half a dozen picture links showing various Klingon insignia, a couple of spacesh ps and so o and a whole bunch of samples, mostly of examples of spoken Klingon, just so you can get your ear in on the vagaries of this guttural pronunciation.

The type of person who thinks that this a good idea to live their lives according to the Klingon code of honour and wants to go to UCLA to take the course in Klingon literature won't find this disk fat too shallow. There is no real look at the linguistic structure and grammar of the language, and the word lists are too limited to be of any use in everyday conversation. On the other hand these people are probably brilliant off keeping their money for the psychiatrists' bills. Oh dear, there we go again, offending hard core trekkies, the last time we did that we got a sack load of hate mail.

Well at least you get a nice V sta rendered image of a Mars like planet to inspire your intergalactic battle. Hilt Scotty ★★★


Learn the Klingon Language



GCSE Physics Tutor 1.2 AGA

GCSE Physics Tutor v1.2 AGA

Educational

■ **Available from** Online PD, 1 The Cloisters, Halsall Lane, Formby, Liverpool L37 3PX

■ **Tel:** 01704 834335

■ **Price:** 75p per disk and 75p P&P per order

There has been a real shortage of commercial educational software on the Amiga, but the PD libraries have always been there with this sort of offering to plug the gap. The problem of course is that with something that isn't professionally released, you tend to be a touch suspicious about the credentials of the author. Many of the PD offerings of this type are to be blunt, total trash, text only presentation and badly written, incorrect facts. The authors of these titles should have a quick shufty at this.

The presentation is excellent, a good clear type book type front end covering light optics, electromagnetism and forces. Each subject has a glossary explaining the main terms and detailing the critical equations. There are also a number of still and animated

Class HD Boot Utils 20

Utilities collection

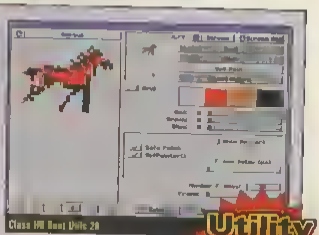
■ **Available from:** Classic Amiga PD, 11 Dean Gate, Radcliffe, Manchester M26 2SH

■ **Tel:** 0161 7231638

■ **Price:** £1 per disk and 75p P&P per order

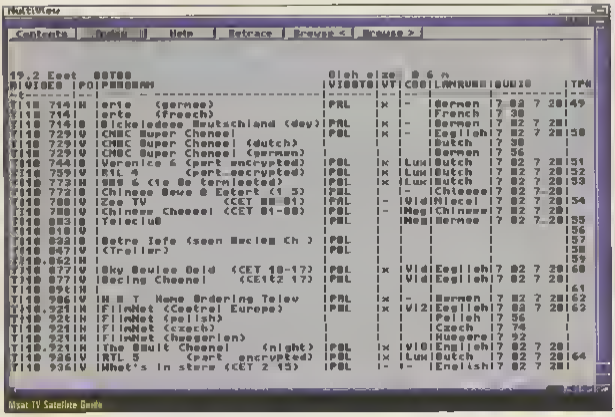
These things are common as dirt. The fact that this is the twentieth such disk that Classic Amiga PD house has put together is a pretty good indicator of that. To make a splash in such a crowded market the collection really has to be a super or one, and to Classic Amiga Software's credit, this one really is.

Rather than cramming on utilities by the bucket load, this one makes do with just four. Bootpic 2.2, MagicPtr 1.0, Diskmaster II and SysInspector. Diskmaster II is probably the best known of the shareware file management utilities, a long way from being up to the level of Directory Opus 5+, but more traditional in its functions. MagicPtr 1.0 is the first release of potentially the best mouse pointer animation package. SysInspector is a system info utility which uses the ClassAct GUI system, and Bootpic 2.2 is an excellent bootpic utility which puts system information up on the screen during bootup. A neat little


Class HD Boot Utils 20

Utility of the Month

collection, no doubt, is itself worth charge you. He but could make it easier ★★★★



diagrams and a bunch of interactive test questions. This version is actually a demo of the full release. The full version is a £4 two disk licenceware title from 5DL, but this gives you a good look at what is there.

I don't think this title will offer much to more advanced GCSE students, but it could be an excellent revision aid for students who are finding the subject a bit hard to get into. ★★★★

Msat Feb 97

TV satellite guide

■ **Available from:** Classic Amiga PD, 11 Deansgate, Radcliffe, Manchester M26 2SH

■ **Tel:** 0161 7231638

■ **Price:** £1 per disk and 75p P&P per order

Msat guide is an AmigaGuide to satellite television. I don't mean that you can look up the time UK Gold are showing the next episode of The Bill, this is a rather more specialist sort of a guide than that. Author Tom Christensen's work is a compilation of technical information on many of the communications satellites that orbit the Earth, beaming their load of televisual delights to the hungry masses below. It may at first seem like this is the height of nerdism, a kind of low orbit trainspotting, but there is rather more of a reward to this than collecting registration numbers. If you have a dish, you can pick up the signals from these satellites and tune into all sorts of weird and wonderful channels. Fancy finding out how Bosnian TV reports the conflict, or want to watch stripping housewives on Ra_Due? It's all here in this enormously detailed guide, and the author promises monthly updates too. If you are a bit of a satellite jockey, you'll curse Tom Christensen for ruining your social life. ★★★★

Picboot 97

Bootup picture displayer.

■ **Available from:** Classic Amiga PD, 11 Deansgate, Radcliffe, Manchester M26 2SH

■ **Tel:** 0161 7231638

■ **Price:** £1 per disk and 75p P&P per order

Picboot is one of many similar programs, but it is a good one. It looks in your prefs/patterns directory, and will randomly choose any image which ends .pic and display it while you are booting up. It really couldn't be much simpler. Just copy a couple of files to your c: directory, add a line to your startup-sequence and you are ready to go. Well OK, it could be easier, there could have been an installer script, but if you don't know how to do it yourself, it wouldn't hurt to learn. The disk comes with a good collection of Amiga appropriate images such as the one reproduced here, but you can any of your own pictures. The Aminet actually has a sub directory purely filled with bootpics, mostly pro Amiga or anti PC, but if your favour tie render is more to your taste, it will do that too. ★★★

Best of the Aminet


Spooky demos abound on the Aminet

To b oade[illegible] ver[illegible] ll A[illegible] PD t rth still th s s the t[illegible] s of o r regul r [illegible] ded cated to h ghq ality s[illegible] [illegible] new add t ons to the A[illegible] [illegible] ve. If you have Internet acce[illegible] you' an dow load these and thousands of other f les from **http://www.aminet.org/~aminet**. Some PD compan es w ll even download specif c f les to order and copy them to floppy disk for a small fee.

To start off w th this month I m go ng to direct you to **docs/misc/petition.lha** (1k) where you can f ll in Ed Collins E mail petition for more Am ga support from games publ shers. From there I suggest a quick jaunt n the dre t on of **game/ag/AMooGA2.lha** (105k) for some top cal humour on the Gateway 2000 takeover. Expect jokes like this to get bor ng any t me now but enjoy them unt l ther.

I have to confess to being a fan of demo intros are my favour te type. f only because they tend to be a lot more stable than mega demos. Check out **demo/age/sn3-64kb.lha** (372k) for a small but excellent collect on of 64k demos entered into the Scanest 97 demo party in Budapest. **deme/ege/k642.lmpulse** the w nnu g entry is worth the download t me alone.

Th nk that Mac trashcans are cool? Then **util/wb/benchtrash.lha** (21k) t s the one for you. It leaves a trashcan out on your desktop – files dropped on it can e ther be moved to your trashcan directory or deleted. The e s a progress bar option and you can even drop disks on t and watch t desperately try to eject them.

Not forgetting...

That old serial dev ce letting you down? Help is on the way! **comm/misc/newsn1.lha** (73k) replaces your old serial dev ce w th a faster leaner f ter dev ce dr ver and t s meant to be reasonably stable too! On a hardware theme, if you have a multiscan mon tor such as the Am ga / Microv tec 1438 or 1768, you can use them w th PCs too – go to **hard/sinver/amigamon.lha** (1k) for some win95 dr vers for these mon tors. Part cularly useful if you have a mon tor switcher or a Siamese.

We l end w th the tr Absurdum sl desh at **demo/slide/LBN-InAbsur.lha** (491k) a great collect on of colourful well dra n cartoony images. Happy surfing!

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★★★★★	**Totally blinding**
★★★★	**Good**
★★★	**Average**
★★	**Substandard**
★	**Oh deer**

SoundFX Sensation

■ **Available from** Epic 43 Akers Way Swindon Wilts SN2 2NF

■ **Tel** 0500 131486

■ **Price** £14.99

SoundFX Sensation is a massive collection of samples. There are around 500Mb of them on this disc, mostly standard Amiga 8SVX files but with a nice smattering of WAVs as well. The title of the CD really says it all – unlike many sample collections which try to cover as much ground as possible, this one has its sights firmly fixed on providing sound effects for games writers, animators, film makers or musicians with a warped sense of humour. The samples are arranged by subject, from alarms to weapons, and contain a sound to suit pretty much any situation you are likely to come across.

Epic have provided a front end for this disc, a player which allows you to play the samples by hitting keys on your keyboard, great for sorting through this massive collection. The front end looks very nice but is marred by the barely readable dark green on black file requesters which Epic seem unfortunately keen on, and it has a tendency to quit for no apparent reason.

Not content to hand you more samples than you could ever possibly use, Epic also supply a directory containing sound and music tools. As this is a multi-format CD a lot are for PCs, but the 50Mb or so of Amiga utilities contains pretty much everything you need to get the best out of these samples.

Make no mistake, this is a Sound FX CD and if you buy it expecting it to be full of great instrument noises for making mods then look elsewhere or you'll be disappointed. If you want samples of explosions, barking dogs, cartoon boings and endless vocal soundbites you will be very happy. ★★★★

Epic Encyclopaedia '96

■ **Available from** Epic 43 Akers Way Swindon Wilts SN2 2NF

■ **Tel** 0500 131486

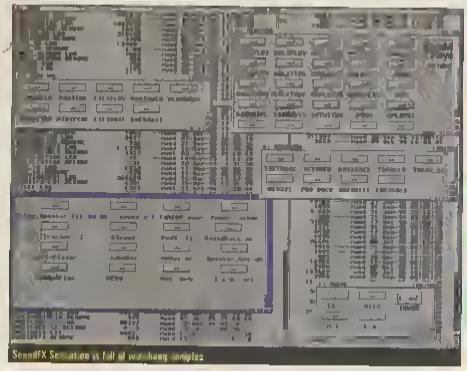
■ **Price** £19.99

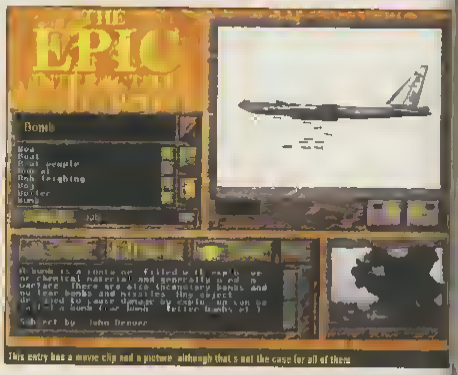
If you read the review of the '97 version in our April issue, you will know that we considered this older version to be notably inferior. When we originally reviewed this 9 months ago, we gave it 77% which was a reasonable score. [illegible] from the 91% we gave Epic '97. It [illegible] deserved a screen star award [illegible] remains useful and informative, but lacks the entertainment value of the newer version.

The Encyclopaedia installs a front end and directory structure on your hard drive. This allows new plug-in extensions to the encyclopaedia to be distributed on floppy or the Internet, a feature you wouldn't normally expect on a CD-ROM. Epic have provided installers for the full version and for a free version for users of unexpanded machines.

The front end is nicely polished with a scrolling selector for you to pick your subject and windows for the text output, pictures and movie clips. Clicking on the pictures displays them full screen, but alas the movie clips don't have this feature, this was another addition to

Sit back and watch the six multimedia shows


SoundFX Sensation is full of wonderful samples



This entry has a movie clip and a picture, although that's not the case for all of them

the 97 vers on [illegible] hotlar system allows you t [illegible] sort th [illegible] n rite directory list sele t [illegible] the sch [illegible] rt [illegible] particularly interest you for later p [illegible] and easy locat or

One of the f rst th ngs that strikes you or [illegible] s how frequently you [illegible] eeted with the message "Sorry there is [illegible] picture for this subject It is a little unfair to criticise Epic too boldly for this after all the disc is packed Rivat products make theirs seem more multimed e by having less entries The 97 vers on has an option to display only entries which have some multimedia support an excellent feature which gives you the best of both worlds with this one you ll have to grin and bear t

There is a lot to explore here that Epic have managed to compile entries about so many different subjects is enormously imp [illegible] ive although we would have liked to have seen n depth articles on the more mportant subjects The frequency of text only entries is [illegible] er down but t seems churlish to criticise an Ency lopaedia for having too much text so I [illegible] p now I would choose to pay the ext a for the updated version but the fact s that this s one of the most popular Amiga CD ROMs ever says it all ★★★★

Mick Davis' Cartoon clip art

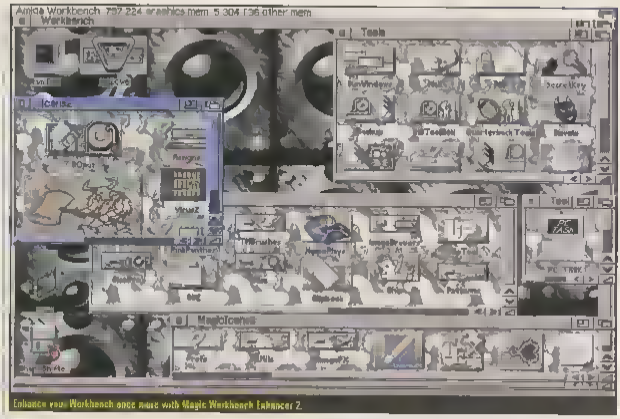
■ **Available from.** Epic 43 Ater Way Swindon Wlts SN2 2NF

■ **Tel** 0500 131486

■ **Price** £19 99

This rather strange d sc rs slightly m sleadngly titled Although M ck Davis cartoon c p art gives ts name to this disk t makes up rather less than the bulk of t despite each mage being reproduced in IFF BMP TIFF PCX and two sizes of GIF The actual quantity of Mick D [illegible] Illustrations amount to a [illegible] re 20Mb [illegible] There s an additional 250Mb of unar [illegible] buted colour c p art mostly covering nature and [illegible] nology They are of a uniformly h gh q [illegible] although a little small at 320 by 400 a d [illegible] o rs

[illegible] y one should think I am criticising M [illegible] s for being lazy I should point out that as his cartoon artwork s monochrome line work 20Mb is actually rather a lot he has done well over 400 images for this col lection The mages are large so as to reproduce as well as possible when print ed out at h gh resolu tons up to 2000 odd p xels square n at least one [illegible] on Styl stically M ck Davis comes across as being traditional even a [illegible] ld fashioned These are more the sort of illustrations fo greetings cards and club



Enhance your Workbench once more with Magic Workbench Enhancer 2.

ne s letters than for the hardcore techno fa [illegible] nes The draughtsmanship is good the style and quality constant throughout so check the images reproduced here

Two things struck me about this disc en unsurprising omission and an excellent nclusion To get the bad news out of the way first these are all in bitmap form only there s no structured art format such as EPS EPS versions of all 400 or so p cs would take two CDs on the r own so this is hardly surprising Image Studio which we gave you last month t will convert to EPS for you The Excellent nclusion is the CD case nlay a 28 page booklet containing thumbnail images of the mages which makes finding one appropriate for your needs a breeze All image disks should have one! ★★★★

Magic Workbench Enhancer volume 2

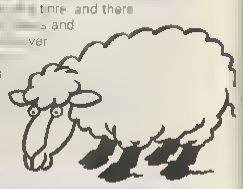
■ **Available from** Epic 43 Akers Way Swindon Wlts SN2 2NF

■ **Tel** 0500 131486

■ **Price** £17 99

In case you haven t been paying attention for the last few years Magic Workbench by Martin Huttenloher s a clever little system for polishing up the appearance of your Workbench which has become the de facto standard for post Commodore 4 colour grey Workbenches Pretty much every program written for the Amiga n the last couple of years has come with a Magic Workbench icon making modern Workbenches look vastly better

MW8 was a huge shareware hit but people want more CD ROM has made it possible for vast collections of backdrops and icons to be distributed Unfortunately there just aren t that [illegible] Ep [illegible] ex [illegible] Workbe [illegible] In ca [illegible] huge [illegible] the [illegible] tools [illegible] [illegible] ly [illegible] ikely to want to e [illegible] rhar [illegible] time and there are f [illegible] and ut is th [illegible] ver use but [illegible] such a range puts your ideat customisation m easy reach The best compilat on of th s type I ve seen ★★★★



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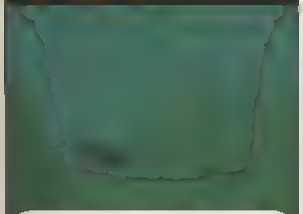
Art Gallery

Pictures from talented readers get a showing once again, along with some chin stroking from our man Andrew Korn.

Deep Strike by C.A. Shaw



Rendered in Imagine. The diffused light adds a lot of impact, but the air bubbles look artificial. Imagine 4's blobs feature could overcome this

Final Conflict by Andy Watkinson

Drawn with Photogenics and PPaint. Use of a mid-tone as the base colour is a tradition in chalk drawing, but Andy shows that the technique can work well in computer art

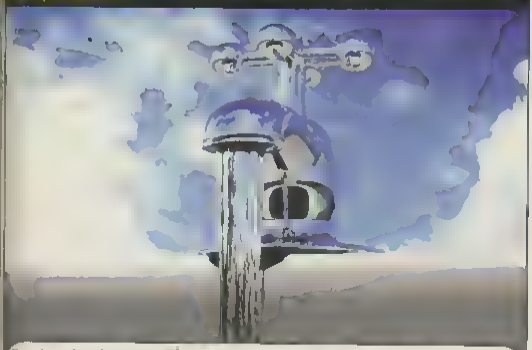
Shadowlands by Paul Hausen

A topical image at a time when the Galileo probe is boldly going, this picture wisely trades scientific accuracy for artistic excellence. A dynamic composition, beautifully executed. Paul sent no details on how it was done, just enjoy

Up by E Berthwick

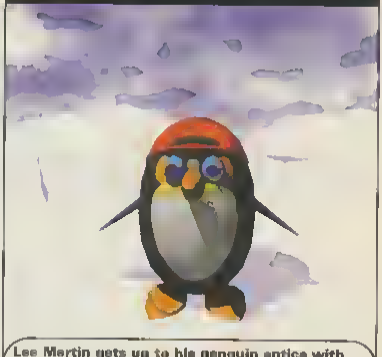
This picture was produced with Cinema 4D 2 and is proof that 3D rendering software has more potential than merely creating space battles. Mark's abstract is reminiscent of the organic images of computer "sculptor" Latham

Alien by Mark Rawlins



Rendered in Imagine with post-processing in Dpaint IV and Image FX. The backdrop lends the otherwise prosaic subject an almost surrealistic sense of grandeur.

Penga by Lee Martin



Lee Martin gets up to his penguin antics with Cinema 4D 3. We gave 92% to Cinema 4D 3 last month, and here's an example of why

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Amiga Workshop

With the best tutorials this side of somewhere far way away, plus views and comments from all corners of the Amiga scene, this is the place to be.

76 Imagine 4.0

Bones: that powerful but mystical animation feature of Imagine 4.0 is explained in this month's essential tutorial.

82 Desktop Publishing

When does word processing become desktop publishing, and which package should you be using? Larry Hickmott has the answers

84 Sound Lab

Tony Horgan explains how this month's CD audio track 3 was put together, and has an update on remixers Dex & Jonesey

86 Wired World

Now that Amiga web browsers have Frames support, Mat Bettinson checks back to the HTML tutorial to show how they are done

89 Surf of the Month

More weird...wonderful and woolly good web sites to paint your browser at, picked from the net by Steve Bye

95 FAQ

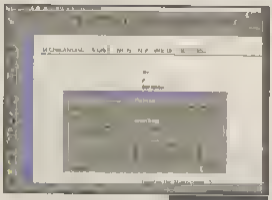
Power supplies: they are subject of more technical hitches than anything else. John Kennedy address this sticky subject

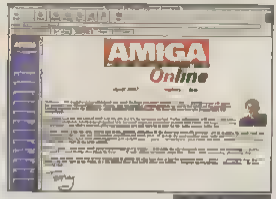
96 Q&A

You ask, we scratch our heads for a while, shout around the office at each other, and eventually, we answer

98 Masterclass

Programming languages eh? We just can't get enough of them can we? Here's another one: Perl. John Kennedy has the low down





Regulars

102 Backchat

Now even bigger than ever, our regular readers letters section gives you even more chances to get your opinions across to the entire Amiga scene

104 Subscriptions

We've got a brand new offer for you this month. As always, a subscription saves you money as well as shoe leather (no more walking down the newsagents once a month)

105 Points of View

Disappointed that Gateway haven't announced plans for world domination based around the Amiga? Well, that's to be expected, reckons Tony Horgan.

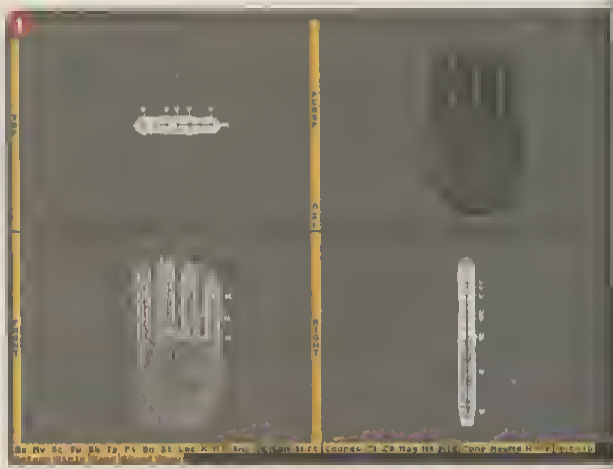
106 Back Issues

This is the page to turn to if you missed out on any issue of CU Amiga Magazine. All the main details of previous issues including cover disk and CD content are here

Imagine 4.0

PART 6

Dsm bones, dem bonss, dsm rsndered bonss – following on from lsst month's look at Ststss, ws'rs now in a position to expsrimsnt with one of Imegins's most powerful (snd confusing) fsetures...



Why do we need bones? So we don't collapse to the floor of course. We all consist of bones around which is wrapped our skin. This is how Bones work in Imagine. An invisible skeleton is created and a single continuous surface is created around it.

Unlike joining objects by placing them side by side, a properly boned object will have a single surface skin covering it, when the objects underneath move, so will the skin. It will stretch and contract as needed, taking care of any textures mapped onto it. This is the key to professional looking animation which is more fluid and organic than would otherwise be possible. Using Bones is a tedious, timeconsuming and tricky process but the final results are worth it. No other animation package gets close to this kind of power.

Bones are applied to existing objects to provide points around which they can be animated. You therefore create the single surface object and then place the bones inside it. How you go about creating the object is up to you – there are many ways offered by Imagine, such as the Blob objects for organic looking shapes. Bones are positioned where you want the object to hinge, for example at the joints.

You then need to tell Imagine which parts of the object's surface will move and which won't. For example, when you bend your finger, the skin on your finger tip will stay perfectly still relative to the end of your finger. However, the skin at the knuckle will stretch. Perhaps now you can grasp how much work there is involved in creating a realistic object with bones.

Creating Bone Objects

In order to save time, we'll use an existing object to apply our Bones to. You should find this object with your original installation of Imagine. If it isn't, then again on the cover CD – in case you have lost it. It's called f and bn and when you load it into the detailed editor you'll see something like this.

(See fig-1)

Notice how all the bones, the axes, are grouped together. If you look at the very bottom, all the others will be connected. Notice how all the axes are oriented so that their Z directions all point to the end of their associated fingers.

(See fig-2)

There is another axis: the object's internal axis. When you click on it, the object itself will be selected.
(See fig 3)

You will need to be able to select both the bones and the object separately, so don't get confused at this point or you won't get any further. Remember the object has two parts: the bones and the surface. The surface also has its own axis. Like any other imagine object

Using Bones

Once a linked object has been properly created, it's dead easy to use. Before we get bogged down in the details, here's how to use the hand object. Load it into the Detail Editor (if you haven't already). You know there are two parts to the object: the linked bones and the surface itself. It's important to remember this distinction.

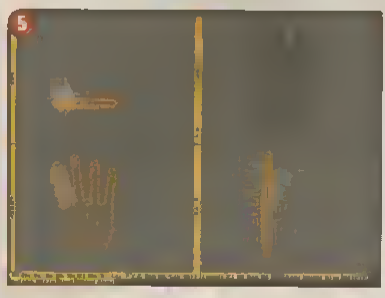
At the moment, the hand is in its default state, and all fingers are open. We're now going to make one finger curl up.

Step 1

Make sure you are in 'Pick Groups' from the Mode menu. Select the first bone in the first finger. You should see the remaining bones in the finger become selected too.
(See fig 4)

Step 2

Rotate the finger in the X direction about thirty



degrees. It doesn't matter which way, as the hand is symmetrical. Notice how only the bone moves – the hand object itself remains unchanged.
(See fig 5)

Step 3

Select the next bone up the finger, and rotate it in the X direction by another thirty degrees. It too will curl, leaving the skin behind (urgh).
(See fig 6)

Step 4

Now we will update the rest of the hand. Select the hand object's axis – not a bone. This will cause the hand object to become active, like this.
(See fig.7)

Step 5

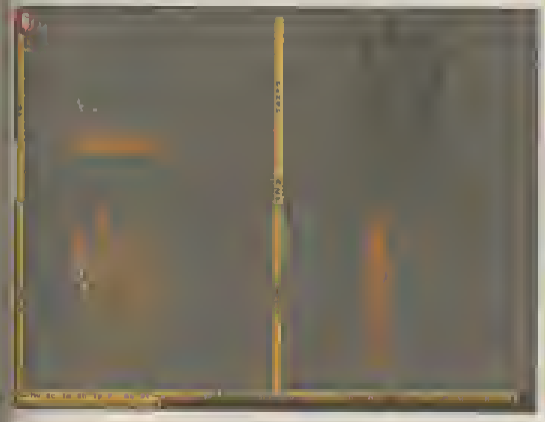
Select 'Bones Update' from the 'States' menu. After a short pause you will see the finger redrawn so that it follows the shape of the bones. Look closely and you'll see only some triangles have changed their shape, while others have remained as before.
(See fig.8)

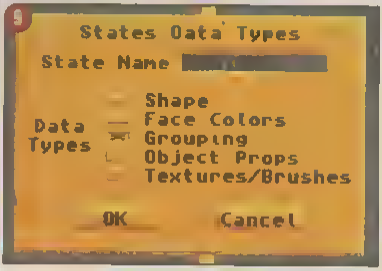
Step 6

Now we've come this far, you should create a new state for the hand object with one finger bent. Use the 'Create' option from the 'States' menu. Make sure only the Grouping option is selected.
(See fig 9)

Making your own Bones

Ready to start the magic spells required for the bones feature to work properly? Good for you. First of all, create the object which you want to animate. It's possible to use existing objects and apply bones – if you want to do this, it's worthwhile trying to get the object into a good, neutral pose.





Continued overleaf ▶▶▶

Now add the bones by adding Axis objects. Make sure you add them in the right order and keep their Z directions pointing in the right way.

Here are some rules when defining bones:
Each Z axis must point to the final object in the chain.
Each object must point in the direction of the final object
Each bone must be grouped, one to another.
Even separate objects (such as individual fingers) must eventually be grouped

When this is done, you are ready to create a new State. Make sure that the object is selected by clicking on the bottom axis. All the bones will become active. If you were creating the object from scratch, you would now create a new State.

There are some rules to make sure this all works:
The first state must be called DEFAULT
The Shape box must be activated
It must be the first State you define.

Now you need to inform Imagine which parts of the object will deform to allow the bones to rotate. This is achieved through using sub-groups. Two sub-groups of faces are applied to each bone: use the Pick Faces mode and then Assign Subgroup. Each sub-group of faces associated with a part of a bone will move relative to the bone.

Sounds complicated? Yes it is. Your best bet to gain an understanding what is going on is to examine the Hand object in detail. Select the object and move to Pick Faces mode. When you select Pick Subgroup (from the Pick/Select menu) you will see a list of all the subgroups which make up the hand. When you select one, the relevant faces in the hand will become selected.

Now if you pick a bone in the hand and select the option Bone Subgrps from the States menu, you will see which subgroup is associated with each bone. The two subgroups between them define a maximum and minimum number of triangles which the bone can control, using these two settings Imagine can determine which triangles can be deformed when the bone is moved or rotated.

Using Bones

The obvious use for Bones is when you need to animate a human or animal figure. However Bones can be used in other situations too, for example, try creating a bottle object, apply Bones to it and using these to animate the bottle jumping around. The bottle will now move most unrealistic way, as its surface stretches and contracts. In fact, it's a bit like you see all the time in TV adverts nowadays, you know the sort of thing: a carton of milk leads a breakout from the fridge as an army of yoghurts, tomatoes and cold cuts bound across the kitchen to make a break for freedom via the catflap. Or was that just a dream I had after eating too much cheese before bed? Well you get the idea anyway.

Once you've got bones sorted, you breathe life into any inanimate object. A more mundane angle on the technique is often employed by those rendering the now rather outdated corporate logos, which twist, stretch and squirm around the screen at the front of company presentations and the like.

Take it to the other extreme and you can animate faces, with one expression morphing into another as the muscles are pulled around by each other to move mouth corners, eyebrows and other features.

Starting with the simpler tasks is recommended though, as with most things.

John Kennedy

Animating Bones

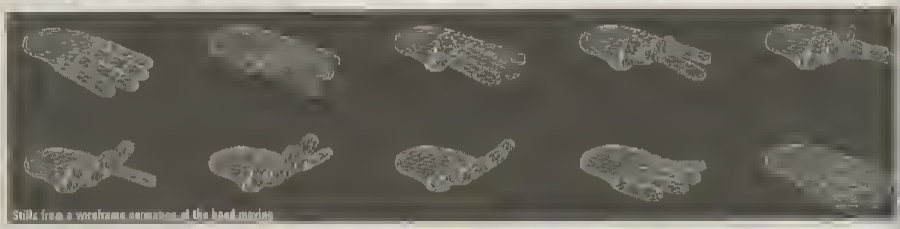
You can continue to move the Bones, update the shape and create new States until you are happy that you have captured all the possible positions that the you will want the hand object to assume. Remember, each State will capture the current position of all the fingers.

To animate the hand, you perform the same steps which we used last month animating objects with multiple states dictating their colour or physical attributes. From within the Action Editor create a single instance of the Hand object, but then select the object in different states to different stages of frames. [illegible] the [illegible] tion, you could give ten frames to each of the four fingers curling up, and the last ten to them all returning to their default positions.

When you animate this scene, Imagine will automatically work out the 'in between' steps and move the fingers accordingly. You should try mapping a texture onto the hand to see if the skin stretches and contracts in the way you would expect.

If you want to know what the animation will look like without rendering the entire scene, or in fact without leaving the Detail Editor, use the State Anim option from within the Detail Editor as this will preview the changes between the States and let you watch them in motion.

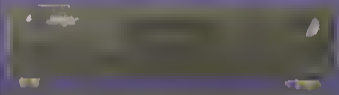
▲ Use the Action Editor to merge the hand between its States



Stills from a wireframe animation of the hand movies

▲ Stills from a scanline animation of the hand in action

Casablanca



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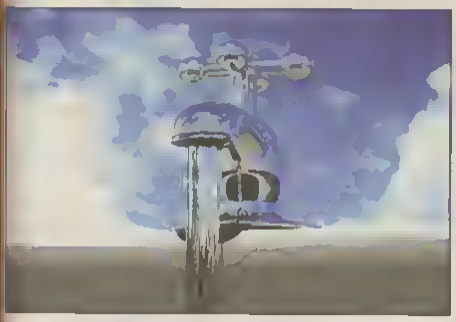

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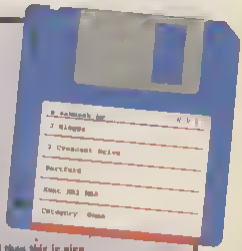

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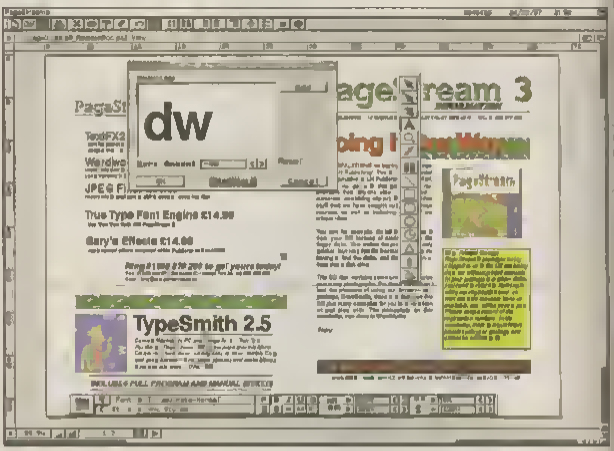
Desktop Publishing

PART 3

When is a DTP package a word processor and which one is right for which job? Find out in this month's DTP mastarclass.



▲ Desktop publishing applications like PageStream 3 and PrePage, have far better functions for kerning text, essential for the professional publisher.

There are two main types of packages you can use for desktop publishing: a word processor and a page layout program. The differences between the two are fairly minor these days. At one time a word processor was only capable of putting plain text onto paper but now you can happily mix text and pictures to produce anything from a letter to a thesis.

When deciding which type of program to use, one or more a DTP application, should you use for what task? There are [illegible] because we all [illegible] ways. What I would [illegible] both types of program [illegible] which ever one [illegible] better for the tasks undertaken.

Word processors

A word processor (such as Final Writer or Wordworth) is a column based application. Instead of having linkable text frames that sit on top of the page (like a DTP app) the columns or columns in a word processor are built into the page and are only editable by changing the attributes for the document.

You can of course have stand alone text frames in a word processor (tables in Final Writer 5) which with pictures can be placed anywhere on the page but the text frames cannot be linked. This method of working is both the word processor's weakness as well as its strength because it enables you to create structured documents like letters and reports very easily even though it doesn't give you the flexibility for positioning objects that you get in a DTP program.

A word processor is also lacking in areas like PostScript where support for colour separations is non existent. They could also do with a much wider range of graphic import filters (not just type support) as well as high end text formatting functions like kerning and so on.

Desktop publishers

A page layout program (commonly called a desktop publishing application) like Professional Page and PageStream differs in that the blank page is just that completely blank. Before you can place lots of text on it you need to create text frames to hold that text. This requires a certain amount of planning but with it comes flexibility in the way you can alter the way the text is presented. Text in shapes for example.

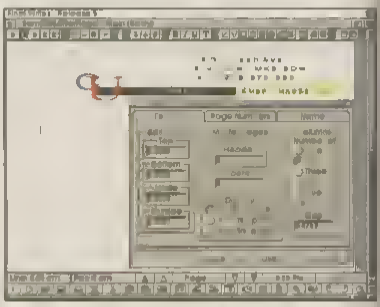
Desktop publishing programs however have their own shortcommings. To check the spelling in the majority you have to send the text to an editor and DTP applications certainly don't come with such niceties as auto correct and a thesaurus.

This is why I prepare text in applications that do have these functions word processors and then lay the text out on the page in a dedicated program for that job. It may sound like it would take longer to work this way but once you know your applications inside out these tasks are completed very quickly.

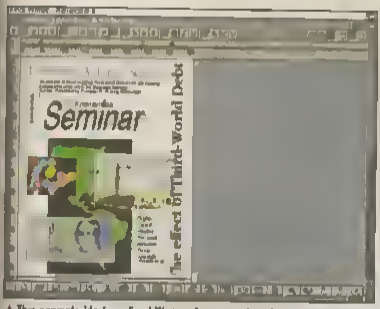
This still leaves unanswered the question of what sort of documents should be done in what type of application so let me give you some guidelines starting off with letters. Remember these are purely personal thoughts that have been arrived at after years of creating documents ranging from newsletters to colour adverts and complete magazines.

Letters

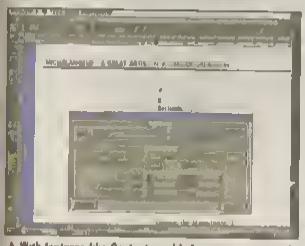
Most people will use a word processor for this. That's because it's probably the quickest way to do the job. The advantage in using a word processor is that once you have your own template set up with all your particulars it's simply a matter of opening the template and starting to type.



▲ Word processors like Final Writer and Wordworth are column based programs where the areas for text insertion are built into the page



▲ This example idea from Final Writer shows just how far word processors have come in leaving behind their text only image of yesteryear.



▲ With features like Contents and index generation, word processors are ideal for books and the like

Reports

This is a borderline case. Because word processors have functions like endnotes and index generation many of you will probably be happy with this type of application. Tables may still be a factor and word processors generally have better support for tables as well. Reports are also generally more structured linking which is another reason for choosing a word processor.

Posters

This is a hard one because to produce the best quality graphics you generally need to print from a dedicated picture printing application like the ones that come with TurboPrint and Studio II. These don't support text through, so if you will need to be printing the page.

I produced some posters recently which only required a few words so I used Draw Studio for the text exporting it as a bitmap and then printed the words and the graphic from TurboPrint's Graphic Publisher. Because TurboPrint's Graphic Publisher supports multiple images this was easy to do.

When Draw Studio supports 24-bit printing something that is coming in the next few months you will be able to create posters in it and print with the same quality you get from these picture printing applications. You can already do this in Art Effect which supports both TurboPrint and Studio II as well ImageFX 2.5 which supports Studio II.

If your posters images are not photographic or maybe the poster only contains text then you can do it in any application although I recommend a DTP package for this.

Newsletters/Magazines

These are probably the most demanding types of documents to create and because of this I recommend both types of applications for their creation. The text should be done in a word processor with all the tools you need for text creation such as spell checking and so on.

The pictures should be created in an appropriate application then the whole lot brought together in a DTP package. The reason I choose a DTP application is because it gives you more control over how the page looks in the end.

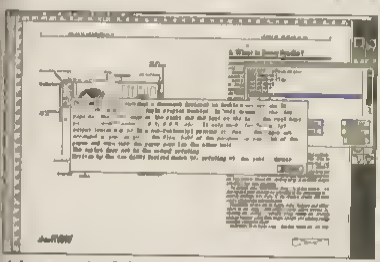
Books

Another toughie this. I do quite a lot of manuals and books and I choose a DTP application but at the end of the day which application you choose will depend on a number of factors, the most important of which is how the page is to be printed.

This is important since if you intend folding the pages and then stapling down the middle (the cheapest method of binding) the pages when printed will need to paginated in the right order. Take an 8 page booklet which is two sheets or A4 folded and printed both sides. Although page 3 follows page 2 it is on a different piece of paper.

What most people do is to create the pages in the order they are to be viewed in the booklet (on a landscape A4 page) and then when they are ready to print group all the objects on each page and move them to the right place so that when printed and folded everything is in the correct order. This is easiest to do in a DTP program. It is still messy but is a lot better than cutting and pasting printing and then photocopying pages. That method works but the results of photocopying leave a lot to be desired. If you have a PostScript printer the job of the made very easy by using Professional Page and a booklet genie by Dot Com. This takes your carefully crafted document, saves all the pages to disk as EPS files and then reloads them in the order necessary so the pages print in the right place. If you don't have a PostScript printer it is possible to do the same thing with a non PostScript printer.

On the other hand if you're happy to use comb binding or hot forever perfect binding using a suitable printer then whatever application you use will not matter a great deal. The advantage to a word processor is that most have index and contents generation and after having manually created few indexes in my time I know this is a very useful function.



▲ A program such as ProPage which has an Allaxx genie does all the fiddly stuff for you when it comes to pagination

Publishing programs

When it comes to publishing there are loads of packages you can use to help you out. Below is a list of some of the most widely used applications. There are many more from shareware applications like Fast to printing enhancement packages such as TurboPrint. If you want information on those not listed call me on 01908 370 230 and I just may be able to tell you where you can get them from.

- **Wordworth 6 - Available from Digita International (01395 270 273) Word Processor.**
- **Final Writer 97 (Softwood) - Available in the UK from Softwood Europe (01773 830 781) Word Processor**
- **PageStream 2 (Soft Logik) - Available in the UK from LH Publishing (01908 370 230) DTP package.**
- **Professional Page 4.1 (Gold Disk) - Available in the UK from LH Publishing (01908 370 230) DTP package**
- **PageStream 3 (Soft Logik) - Available in the UK from LH Publishing (01908 370 230) DTP package**

Leaflets

A word processor is well capable here but it would stick to a DTP program because of its greater flexibility. Generally a leaflet will require the composition of lots of small elements and for that PageStream or Pro Page will be more suitable.

Labels

Producing labels is quite common these days thanks to Avery and other brands of sheet labels. Again a word processor can be used but a program like Professional Page comes with genies that can create many popular types of labels, all you do is fill in the blanks.

Professional colour work

By this I mean full colour packing magazine product and so on, definitely a job for the desktop publishing program. This requires support for Pantone catalogue colours, separations and lots more high end functions. I'll go into this lot next month when we look at real desktop publishing where you can create the document on your Amiga and then have it printed on a printing press. ■

Larry Hickmott

Sound Lab

Find out how track 3 of this month's CD edition was craatad, and catch up with Dex and Jonasey.

If you have the CD edition of this month's CU Amiga you'll find two audio tracks on the disc as well as all the usual software. These can be played on any normal CD player – you don't need a CD ROM drive to hear them. Track 3 is called Catterpiller, a tune written and recorded by myself for the sole purpose of making people jump around like loonies at house and techno clubs. For the benefit of all of you with similar aspirations this month's Sound Lab concentrates on how the track was put together, from conception to CD duplication.

The conception

As is often the case, the original idea for the track was rather different to the tune that I finished up with, but the basic theme still survived. Most musicians tell stories (true ones at that) about how they had piano lessons when they were a kid and could play the violin when they were still in nappies. Not me, although I did get a Casio VL Tone for Christmas once. So with this in mind, inspired by a couple of very simplistic techno records, I decided to have a crack at banging out a tune that matched simplistic melodies with an equally simplistic beat, but give it all a happy, bouncy kind of vibe.

So that was the general idea, next it was time to lay a few foundations.

If you take a look at the list of gear that was used to make the track, compared to a single Amiga and a stereo it might look fancy, but by the standards of most studios, it's still quite rudimentary. Most of the equipment is fairly low end (8-bit samplers, entry level mixer, hi-fi monitor speakers, one 16-bit effects unit) and if you use a lot of low-end gear together, you run the risk of everything blurring into a mess of noise. One way to avoid this is to keep each element of your music very clearly defined in its role. In other words, keep it simple – don't saturate any particular aspect of the overall sound.

Bearing this in mind, I thought it would be nice to resurrect that scratchy old bass drum/open high hat loop that graced many of the early house records, especially as that plangad open high hat can really cut through the mix on a high-fidelity sound system. In particular, lack of time and resources, I ended up with a compromise of a scratchy old bass drum and a rather crisper standard TR-909 high hat, which was good enough. A quick decision was then made that the two other most prominent elements would be a synth bleep between the bass drum and a wobbly kind of synth riff over the top, even though it ended up rather fuller than that in places.

Blow by blow

Moving roughly from the start of the track to the finish, here's an explanation of how each of the parts were made.

The gloopy intro sequence comes from the Cheetah MS6 analogue module, triggered as a MIDI instrument from within the OctaMED song. The mono MS6 sound was treated with a combination delay/distortion effect handled by the Yamaha FX500 via the Effects Send controls on the mixer. The FX500 has a mono input and a stereo output with automatic stereo bouncing on most effects, which is excellent for adding movement to what would otherwise be a rather plain sound. Tweaks were made to the filter cutoff and resonance controls to sweep it up and down for the intro.

Next up, it's the bass drum. This is just an old 8-bit bass drum sample, which in my collection is called Slappy Kick. If you've got the March CD issue of CU Amiga you'll probably find it there with most of the other samples used in the track. No effects were used on this, although the sample itself has a little ambience of its own.

Here comes the robot vocal. Just the start of the Election sample is used at the top of the four-bar loop and passed through the same delay/distortion effect as the MS6. Shortly after, it's played right through with a slightly longer delay time stretch effect using my old favourite Sample Offset command (number 19). This sample is played on the same Amiga channel as the bassline, which was not to be passed through the effects, so the Effect Send knob had to be turned back to zero once this part was over.

In comes that high hat, followed by an additional high hat loop which also includes a little extra percussion. If I remember correctly, the bassline comes in next and it all starts jiggling along and getting into a bit of a groove.

Once that bit has run its natural course, in comes that quacking synth riff supplied by the BassStation. A bit of realtime knob twiddling was employed over the next few bars to give it more character, once again the cutoff and resonance controls were mainly used. Just at the point before this riff comes in, the FX500 was switched from the dis

Point!

Do you A&R for a decent record label? Wanna sign up this track for a proper vinyl release? If so, contact Tony Horgan on 0171 972 0755 during office hours and we can talk turkey.

tortion to a reverb setting through which the BassStation was also passed.

After a while it breaks down to the BassStation on its own, then builds back up again and goes on its way in a similar vein to the earlier section, before breaking down a second time. This time the Cheetah MS6 which was previously playing the gloopy sound from the intro is switched to a different sound to play the rhythm and melody. The long and the short of it is that the rest of the elements come back into play again, with the addition of some [illegible] chords from the chromatically [illegible] Yamaha PSS790 home keyboard (which also helps out [illegible] the crash cymbals through [illegible] the track).

Mixing and mastering

A Spirit Folio Lite mixer was used to combine all the instruments. It's a brilliant little starter mixer with four mono inputs, four stereo inputs, balanced microphone inputs, inserts, high and low EQ on each channel and two effects loops. Spirit have just discontinued it, but if you're quick you might be able to pick up one of the last of the old stock for as little as £150 – as I did very recently.

Sound monitoring in my home studio was handled by an old second hand Technics amplifier that cost £35 and a pair of second hand Jamo speakers that cost around £80. Mixes were mastered to DCC on a Philips DCC 730 which is now selling for £219 new. These recordings were then tested on a couple of alternative hi-fi systems to check the balance of the sounds and the EQ levels. From there, it was recorded to hard drive and cut to the CD.

Tony Horgan

The kit list

Cutterpiller was created and mastered using the following equipment

- **1 Amiga 500 with Chip RAM upgrade**
- **DeltaMED 4**
- **Novation BassStation**
- **Cheetah MS6 synth**
- **Yamaha FX 500**
- **Yamaha PSS790 keyboard**
- **Spirit Folio Lite mixer**
- **Philips DCC 730 recorder**

Monitoring system:

- **Technics hi-fi amplifier**
- **Jamo hi-fi speakers**
- **1989 black & white TV**

The DCC master was then transfered to CD via a Teccata 16-bit encoded card and actually cut to the CD master with MasterISO.

Bassline flapping

The trickiest part of the mix of Catterpiller was getting the bassline right. After deciding on the bassline pattern itself, then throwing it away and later reverting to the original once more, I had a bit of a wrestle with the mixer and a couple of different playback set-ups (including 'very loud' and 'very quiet') to get it sounding right.

The trouble was that the bassline (not the introductory synth line) is played on two different Amiga samples. One is a short 'spikey' kind of synth bass, while the other is a heavily filtered TB303 note. It was the TB303 sound that caused a bit of commotion, as it had an exceptional amount of deep bass in it. Fortunately I was able to tweak this by giving it its own channel on the mixer, turning down the bass EQ and turning up the overall channel volume to compensate slightly. It sounds simple, but it was a [illegible] having the [illegible] flapping and losing the bassline altogether.

Dex and Jonesey

UPDATE

Back in the summer of 1996 two DJs from Kent first onto the dance [illegible] scene with their [illegible] friendly remix of [illegible] Higher State of Consciousness. Since then that mix has managed to project what was originally an underground classic onto every pub jukebox in the land.

After such apparent overnight success it [illegible] the back of what was already a massive track, have they managed to keep up to their promising start? It took a trip down to leafy Welling to find out.

The short answer is yes. A glance at the list of their remix assignments to date shows they have been busy boys indeed. If success of a remix team was based on the enormity of the original tracks they rework, then Dex and Jonesey have certainly hit the big time recently when they won the remix honours for last years Ibiza anthem BBE's Seven Days and One Week, which got plenty of exposure with its release on the flip of BBE's follow up single Flash.

If, on the other hand, their success was to be rated on the names they were remixing, a similar conclusion would be met with Phil Collins and Lionel Richie both getting thoroughly funked up by the pair. Then again, maybe you'd rather go by sheer volume of work they've attracted, which is approaching a total 20 remixes and countless DJ bookings. Whatever the acid test is, the effect their tracks have on a dancefloor, which could reasonably be described as devastating.

But Dex and Jonesey aren't just remixers. In fact, their last release, The Beginning, was charted as number one record of the year by many a top DJ. As you can see from the track list, they've got plenty of other original productions on the starting block, so [illegible] you can expect to hear [illegible] bangring clubs and radio shows over the coming months.

It was good to see that the boys were still the same people and have obviously enjoyed the last year. The cut and thrust of the record industry failing to dampen their enthusiasm one bit. As their Amiga setups, the remixes have paid for a few additions. But the core is still the same: two Amigas, ProTracker and a TV (just the one). To this they've added a very desirable Spirit Folio SX mixer, a new DAT recorder and a Digi-Tech Studio Quad effects unit. We hope to have a track from Dex and Jonesey on next month's CD.

Original productions

The Beginning, Chemists of Fire, The Anthem, That Piano Track, In The House, Check Out The Groove, Nothing Can Stop Me Now, Piano Heaven.

Remixes to date

Josh Wink	Higher State
Outrage	Tell and Handsome
Witchchild	Jump In My Boat
Partizan	You Drive Me Crazy
BBE Seven	Days and One Week
Phil Collins	Dance Into the Light
Lionel Richie	All Night Long
Real 2 Real	Nuova La Cadera
David Morales	Is Do Shotin
Digital Blondes	The Anthem
Mr Spring	Voyager
That Kid Chris	Feel The Vibe
Loop Da Loop	Do With The Flow
United Nations Project	United Nations of House
Bass Bumpers	The Music's Got Me
Tyrant	Dirty Minds
X-Avia	Dreaming
Jonathan Riley The Bass That Bass Bass	
Mr & Mrs Smith	I Wanna Feel It

Wired World

This month's Wired World makes a return to the HTML tutorial to cover the advanced technique of Frames.

We came to the conclusion of the Wired World HTML tutorials when [illegible] Tables. Since then the [illegible] Browsers have come [illegible] leaps and bounds with two of the biggest [illegible] supporting so called Frames. So [illegible] revival of the HTML tutorial to [illegible] Frames for your own Internet [illegible] pages.

[illegible] and IBrowse [illegible] have [illegible] Frames [illegible] AWeb [illegible] due any time [illegible] PC and Mac browsers [illegible] Frames support. All [illegible] commercial browsers so if you want the best browsing [illegible] you should purchase [illegible] least [illegible] browsers is essential. Incidentally [illegible] showing them all head to here in the next issue of CU Amiga.

Justifiable Frames

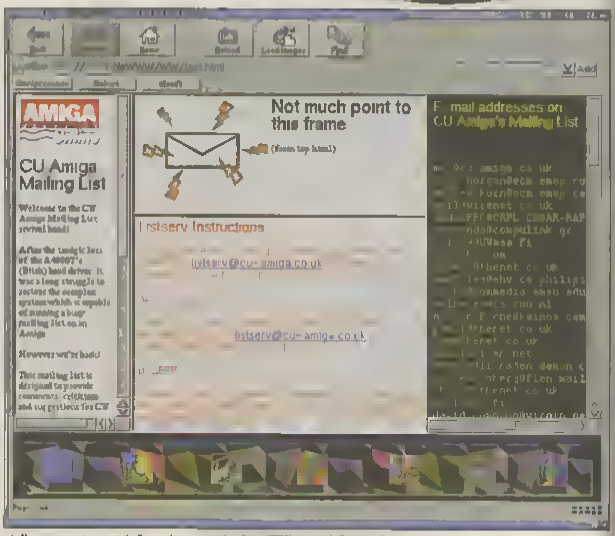
So just what [illegible] Frames? [illegible] HTML [illegible] now our simple [illegible] This helps solve [illegible] one edge [illegible]

There are [illegible] other uses for frames. The easiest way to [illegible] one of the [illegible] no time you [illegible] the original [illegible] and consider [illegible] small at 640 [illegible] conservative [illegible]

A [illegible] This is a [illegible] ment is not the BODY [illegible] page after [illegible] and background pattern etc. The difference is that our Frame document does not have any content at all. It simply defines the frames and points them to separate documents which will have the content for each Frame.

Let's look at how to place a simple static banner at the top of the screen. A Frame document takes the bodyless form as follows

```
<HTML>
<HEAD>Our Frames Page</HEAD>
<FRAMESET>
</FRAMESET>
</HTML>
```



▲ Here's an outrageously Framed up example of our HTML tutorial. One would hope that webmaster would be more conservative in their use.

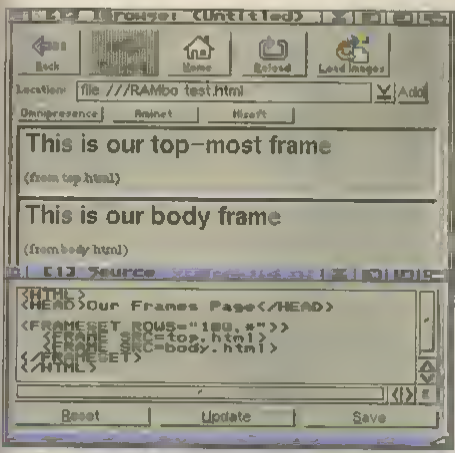
This is the basic structure of a Frames page, obviously the header bit is the syntax for the FRAMESET tag which we'll be using to tell it only has two attributes ROWS or COLS. This defines whether the frames will be vertical or horizonal. In our case we want a Frame at the top of the screen, say 85 pixels high and another frame to fill the rest of the space. For this we would put the attribute ROWS="85,*". The * means that the size isn't specified so it will use the remaining space.

Defining Frames

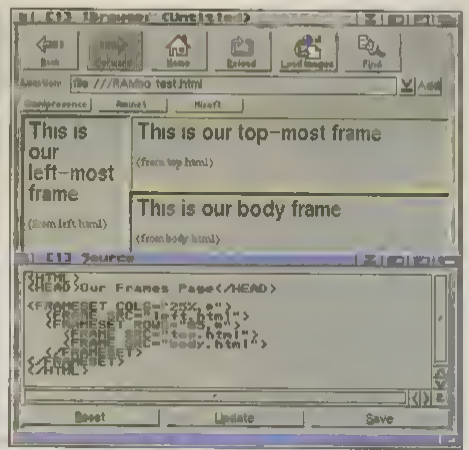
In [illegible] FRAMESET [illegible] then need to define [illegible] sizes. We want two [illegible] so we'll [illegible] two FRAME tags. The [illegible] separated by commas [illegible] There's a few attributes for the FRAME tag but we'll just set the name and source HTML in this example.

```
<HTML>
<HEAD>Our Frames Page</HEAD>
<FRAMESET ROWS="85,*">
<FRAME NAME="Top frame"
SRC="top.html"> <FRAME NAME="Body
frame" SRC="body.html"></FRAMESET>
</HTML>
```

With this example we have the basics of frames. The first FRAME statement matches the 85 pixel height ROWS element in FRAME SET. The second has "*" so it will fill the rest of the window. The FRAME tags now have the name defined and most importantly the name of the HTML documents that will fill the



▲ Here's a two Frame page: the source code displayed underneath shows the FRAMESET definition of two horizontal Frames.



▲ Making the leap to three Frames, notice that the first FRAMESET tag defines the left-most column 25% of the screen width. Nested within are the next two horizontal Frames.

specified Frames. To see it in action, all we need to do is create two really basic HTML documents and save them as top.html and body.html. They're exactly like any normal HTML document apart from the fact that you leave out the <HEAD> tag.

Let's see how far you can take Frames. It is possible to nest FRAMESET tags inside other FRAMESET tags, as in the following example:

```
<FRAMESET COLS="25%,*">
<FRAME SRC="left.html">
<FRAMESET ROWS="85,*">
<FRAME SRC="top.html">
<FRAME SRC="body.html">
</FRAMESET>
</FRAMESET>
```

What we've done here is specify a vertical FRAMESET with COLS (horizontal) instead and used 25% of the Frame instead of an absolute value in pixels. Next the left most Frame is defined with the first FRAME statement and positioned left.html. Now instead of a simple FRAME statement for the remaining Frame, there's another FRAMESET tag. This lets us define further Frames within the frame defined in the first FRAMESET tag.

This FRAMESET tag's sort earlier one defining a top Frame 85 pixels high and another Frame to fill the remaining space. It does as I did before except we have a Frame 25% of the screen down the left. See the screenshot above right for the results.

FRAMESET attributes

There are [illegible] the important attributes for the FRAME tag. Here's a [illegible]

SRC="url"

The SRC attribute takes as its value the URL path of the document to be displayed in this particular frame. Frames without this [illegible] attribute are displayed as a blank space the size the frame would have been.

NAME="frame_name"

This is one of the Frames you create so that it's possible to TARGET new data to this Frame by name in a later TARGET tag.

MARGINWIDTH="value"

The MARGINWIDTH attribute is used [illegible] author wants some control [illegible] Frame. If specified [illegible] MARGINWIDTH is pixels [illegible] (from frame edges) and [illegible] there's no space [illegible] document.

MARGINHEIGHT="value"

The MARGINHEIGHT attribute is just like MARGINWIDTH above, except it controls the upper and lower margins instead of the left and right margins.

SCROLLING="yes|no|auto"

The optional SCROLLING attribute is used to describe if the Frame should have a scrollbar or not. The default is not to have a scrollbar, or at least, not to have scrollbars always being visible, so that frame [illegible] results in scrollbars never being visible. A [illegible] instructs the browser to decide whether or not to place a [illegible] place from where new [illegible]

NORESIZE

The [illegible] NORESIZE attribute [illegible] that indicates that [illegible] resizable by the user. User [illegible] from [illegible] dragging a frame [illegible] position. Note that if any frame [illegible] edge [illegible] resizable, that entire [illegible] moving. The [illegible] resizability of other frames [illegible] simple FRAME tag:

```
<FRAME NAME="test" MARGINWIDTH=10
MARGINHEIGHT=10 SCROLLING=NO NORE-
SIZE>
```

There's another tag called NOFRAMES for browsers that don't support them. A Frames capable browser will skip over the contents between <NOFRAMES> and </NOFRAMES>. So a typical bit of HTML might read:

```
<NOFRAMES>
This page uses Frames! You are
using a frame challenged browser,
please get Voyager-NG or IBrowse.
</NOFRAMES>
```

Targetting Frames

Lastly the most advanced feature of Frames is the ability to target new data to any of the Frames we've set up. This relies on the NAME attribute in a FRAME tag so that the Frame can be referred to later. Here's an example:

```
<A HREF="new.html"
TARGET="body">Click here</A>
```

If our initial FRAME [illegible] called body, we have [illegible] when the user clicks on the link [illegible] data new.html will be loaded into the named frame. This is extremely [illegible] changing the content of any [illegible] without reloading a new [illegible]

TARGET can also be [illegible] Current Selling Maps [illegible] APPLET window name [illegible] JAVA window name [illegible] FRAME [illegible] after the HREF [illegible] particularly important [illegible] target window [illegible] new document will be loaded in to replace your Framed up page altogether. ■

Mat Bettinson

Surf's up!

This month there's a new HTML creator called Page Monstar and CU Amiga gets a great new web site! It's good to be netted.

CU Amiga's new Web site

You could be forgiven in thinking that we'd forgotten about the CU Amiga home page. A number of factors contributed to the delays in updating it. However, we've now totally redesigned the site and it's bigger and better with a promise of regular updates and guest material every month. Do you need another reason to point your browser to http://www.cuamiga.co.uk?

The site will expand further in the coming months and we'd be most grateful for comments and suggestions. Please mail them to webmaster@cu-amiga.co.uk.

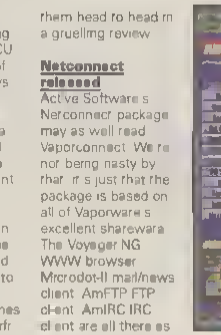
The new site requires a Frames capable browser and was specifically engineered to look the best on Voyager-NG and IBrowse 1.1. As of going to press, AWeb 3.0's release was imminent. Beta testers of AWeb 3.0 reported that it also works well with CU's site. Next month we plan to round up the Amiga's top three browsers in the latest incarnations and put them head to head in a gruelling review.

Netconnect released

Active Software's Netconnect package may as well read Vaporconnect. We're not being nasty by that, it's just that the package is based on all of Vaporware's excellent shareware. The Voyager NG WWW browser, Microdot-II mail/news client, AmFTP FTP client, AmIRC IRC client are all there as well as AmTelnet, AmFinger and AmTerm. All of this software is the full registered versions and since they are all MUI based, the unregistered MUI is also included. It's some surprise that given the MUI bias, Miami wasn't chosen for the TCP/IP stack to round off the package. Instead a new version of AmiTCP called v4.5 dialup is provided. Capped off with a front end GUI to configure the system for a range of UK ISPs, AmTCP's configuration complexities are bypassed. Netconnect sells for £49.95 and a demo is available from Active Software on 01325 352260. http://amigaworld.com/netconnect/

Finale get Voodoo

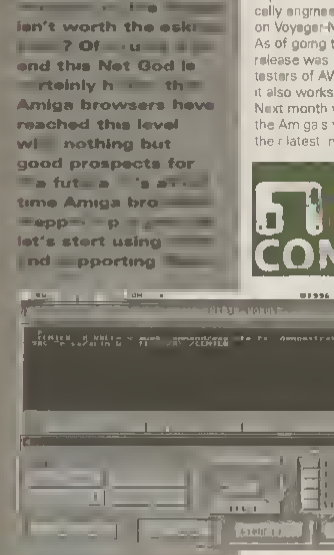
Finale Development, developers of the forthcoming Final Web Cruiser, have taken over Osma Ahvenlampi's Voodoo E-mail client. Alain Penders of Finale Development said that they intend to bundle a light version of the Voodoo package with their Finale Web Cruiser browser when it is released. This would seem to hint that Finale Development intend to develop the functionality of their forthcoming browser package further than simple browsing. Voodoo was released in Amiga Technologies' Surf Pack in December 1995 supporting MIME binary encoding and PGP but in a GUI environment for the first time for the Amiga.

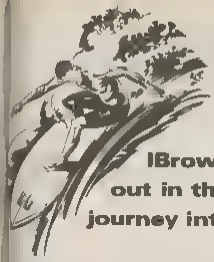


▲ Our new Web site in all its glory. Wonderful, isn't it?

Pagemonster HTML creator

CultureShock, a Seattle Washington-based Internet and multimedia company has released a commercial Web page generation tool called Pagemonster 1.0. Some of the boasts that the package lays claim to are: no knowledge of HTML required, digitized voice narration as on-line help, use of favourite graphics applications from within Pagemonster, storage of external links for later retrieval and the Forms Wizard which generates HTML Forms by just a few clicks of a button. The US$49.95 (+ US$5.00 P&P) package is detailed in full on CultureShock's Web site at **http://www.serv.net/~cshock/**





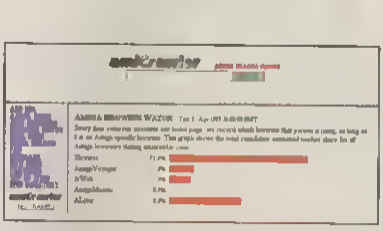
Surf of the Month

IBrowse, Voyager and Aweb battle it out in the surfing stakes in this month's journey into the world wide web.

The group Scoopex have been knocking around the demo scene in various shapes and forms since 1989 and are the crew responsible for the first ever Trackmo release with that corker of a demo Metal Hangover

I mention this because I recently bumped into the **Scoopex site** and had a nose around The frames based site is well put together and has some nice graphics The Scoopex news page is a bit alarming e g Deck sold his Amiga and bought a PC Oxbow moved onto the PC etc But no worries the group are still releasing Amiga stuff and plan to continue There is also a section on the site where you can download most of Scoopex's Amiga and PC releases and read the group's history Mildly interesting

More interesting is **The Aminet Programmers Index** whose purpose in life is to try to collect information about programmers that have submitted their work to the Aminet archive A nice idea but I am trying hard to think of what use this information could be The site itself is set up using the Aminet file structure game\demo\ etc You can navigate your way around this pseudo Aminet and if a program displays an author info con you can click on it and read all about him/her So far 31 programmers have bequeathed their souls to the list It would certainly help if the site was a bit more alluring there are no graphics at all (well 2 icons to be exact) and



[illegible] anyone need to use it

Amicrawlers Amiga browser Watch is an interesting and continually updated page that keeps tabs on what Amiga browsers you surfers are riding Currently **IBrowse** has a commanding lead with 73 9% **Voyager** is a distant second (13 6%) just holding off **Aweb** in third with 11 7% The two outsiders of the race **Amiga Mosiac** and **ALynx** battle it out for a close last place with an unremarkable 0 3% and 0 2% respectively I think over the next year Voyager will be making good headway on IBrowse

Hmm Amicrawler's graph seems to have blown a fuse graphically as far as Alynx is concerned According to the bar chart it is the second most popular browser I think the author of Voyager could well disagree

Also close by is **Amicrawlers Amiga Top Twenty Sites** which can throw up some worthwhile destinations One of those sites in the top twenty is **Gateway 2000** or Gateway 2K The site is absolutely enormous but expertly designed and so fairly easy to get around The big disappointment is that there are only two small mentions of the Amiga and they are both press releases

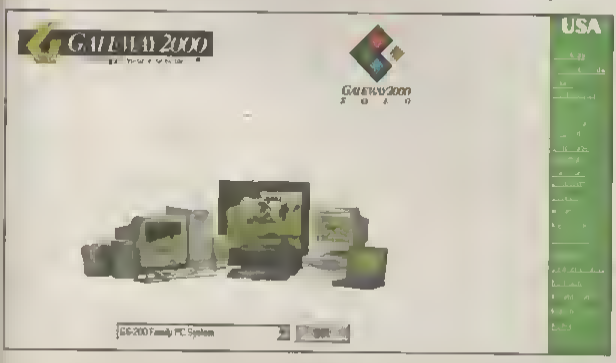
Before I go an honourable mention to a site called exactly that **Honourable Mention** This most excellent site has a collection of virtually every Amiga related article printed in the major Amiga press since the Amiga's inception It's a very interesting and useful archive that is kept up to date nice to look at and easy to navigate

We couldn't finish this Surf of the Month without pointing you in the direction of the new **CU Amiga On-line** web site which has just be re launched with a snazzy new look new content and a completely new layout The combined forces of our editorial and design teams have put together a site that aims to serve all our readers with news features entertainment and downloads Created by webmaster Mat Bettinson it is one of the most efficient sites you'll find which is good news for anyone with a slow modem

Future expansions to the site will include a much wider range of downloads more features interactive surveys polls and lots of other good stuff

You can E mail the team direct from the site so let us know what you think of it and if you've got any specific suggestions for the site E mail Mat with your comments That's all for now

Steve Bye



Those sites in full

Scoopex
http://www iki ku fi/ scoopex/
Aminet Programmers Index
http://www flevel co uk/aminet/index html
Amiga Browser Watch
http://amicrawler com/browsers/
Amicrawler Top 20 Sites
https://amicrawler.com/spider/state.html
Gateway 2000
http://www gateway2000 com/
Honourable Mention
http://www rust.net/~miguash/hm97 html
CU Amiga On-line
http://www.cu-amiga co uk

CU Amiga Classifieds

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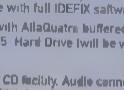

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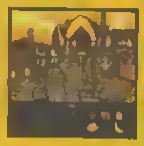
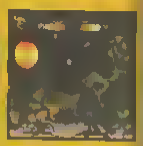
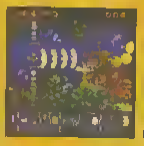




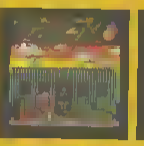


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FAQ

Frequently Asked Questions

Power problems: too much hardware, not enough watts? CU Amiga can help.

Q. What else system can I power without resorting to a new power supply unit?

A. The answer to this question depends on so many factors: the individual PSU, the individual peripherals attached, how lucky you are... In general, you should start to consider upgrading the standard A1200 PSU if more than a hard drive and accelerator card is fitted. For example, if you have a SCSI interface, external floppy disk drive and a video digitiser as well as a hard drive and accelerator you are pushing your luck.

Some CD ROM drives don't have their own power supply and borrow power from the A1200. In these cases I would definitely consider getting a new PSU. In general, the more you have hanging off your Amiga, the more likely it is that you will need to upgrade your PSU for reliable operation.

Q. How will I know that I need a new PSU?

A. Some of the symptoms can be over stretched PSU include: the smell of burning, a very hot PSU unit, malfunctioning peripherals and unexplained crashes. If your Amiga crashes regularly, even when you aren't touching it, this could be a power problem.

Q. How can I be sure my Amiga is crashing because of a power problem rather than anything else?

A. Try using it with different combinations of all your most power hungry peripherals, such as hard drives or external drives. Try to rule out individual components of your set-up. If the Amiga still crashes, it could be a problem with the Amiga itself, such as an overheating problem related to the processor or other chips.

Q. Can I use an A500 PSU with my A1200?

A. Yes, they are pin for pin compatible. The A500 PSUs seem to provide more power than those supplied with A1200s, and they are therefore worth trying. A500s can be picked up for a few quid these days, and the PSU and mouse can be used on an A1200. A500 PSUs are darker in colour than A1200 PSUs (not least because they become so grubby with age) and much heavier.

Q. Can I use an A500 PSU with an A1200?

A. Yes, although these PSUs seem to be even lighter and lower rated than those supplied with the A1200. They are therefore a bit of a last resort.

Q. My PSU makes a faint ticking noise when it is switched on, but not connected to my Amiga. Is this normal, or is it going to blow up?

A. Well mine does it too. I don't think it's a good idea to leave it plugged in and switched on with no current being drawn, so don't try it.

Q. Can I use a PSU from a PC?

A. Yes, although you will have to sort the wiring out yourself. This can be tricky, not least because the Amiga has a non standard power connector which is difficult to get hold of. You can of course use the one from your existing PSU. Use a multimeter to check the voltages very, very carefully. You will then have to find some way of housing the PSU, as most are not designed to be used outside a PC case. We covered some aspects of this with wiring details in part two of our tower conversion feature in the May issue.

Q. Will a tower system help?

A. Yes, as most tower systems include a separate PSU. Some tower systems are really only empty PC cases for you to house hard drives and CDROM drives. However, they come with a PSU which will save your existing Amiga unit from getting too hot and bothered. True tower systems which re-house your entire Amiga should definitely come with a new PSU.

Q. What happens if I get a PSU which has too much power?

A. The power rating (in watts) describes the maximum power which can be drawn, not the power which is supplied. The Amiga and its components will only draw the power that it needs. However, you must make sure you are providing power at the right voltage level. Mess up the 12 volt and 5 volt lines and it will hurt more than your Amiga's feelings.

Q. Where can I buy a new PSU?

A. Replacement and new up rated power supplies are advertised by various dealers (see the box below).

Q. Can I run the Amiga on batteries instead of a PSU, to make it portable?

A. You can try, although ordinary dry batteries (as used in torches, Gameboys and so on) won't last long enough to be useful. You might have more success with the batteries designed for use with laptop computers. However, these are expensive. The Amiga was never designed to be battery operated and its chips are greedier than those used in laptop computers.

Q. Do I really need to switch everything off before disconnecting leads for monitors, printers, mice and so on?

A. No, but if you don't you run the risk of damaging your Amiga by destroying a chip such as one of the CIAs. These are not easy to source or replace.

John Kennedy

UK dealers stocking PSUs

Dealer	Tel.
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Not everything fits into a pigeonhole but anything you like fits in here

Whatever the level of your technical problems, put them to our experts and we'll do our best to sort you out. Remember to give us as much info on your systems and problems as possible to help us help you.

Say goodbye to these chess-a-rama intros, they're going next month, we promise...

... thank God for that, I've been getting ribbed about these damned things for years now!

Where next?

My brother and I have owned a basic A1200 for a couple of years and we would like to expand our system to accommodate better games. We would also like to install word processing and spreadsheet software. What should our first purchase be – a hard drive, extra RAM or a monitor?

Graham Wright, Glasgow

Of the three you mention the monitor is the least important. It will allow higher resolution screen modes, which is not important for current games but makes word processing and spreadsheets a lot nicer to use. A few programs are happier running with some Fast RAM in place but get an accelerator plus memory instead – the difference in cost is minimal these days. Hard drives are essential for software such as word processors and spreadsheets, and running multi-disk games from a hard drive is a million times nicer. Go for the hard drive first – you'll find you can fill any size in time but 170 or 340mb will suffice and can be obtained very cheaply. Then, as soon as you can, get a low end accelerator with 4Mb RAM. Power Computing are doing one for £89.95

Sample dump?

Some of us can't afford CD writers or sound cards so I have a few questions about Octamed Sound Studio.

1. Can you save a 16 bit WAV file to disk even though it is a full song?

2. Can you take this file into a studio so they can load it into a PC and record it to DAT?

3. Can you load 16 bit stereo samples?

4. Do you think you could put audio sound samples onto the cover CD or put samples on disk for those of us without CD ROMs?

Barry Walker, Livingston

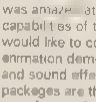
1. The question doesn't quite make sense but... yes you can save (record) a whole song to disk as a WAV sample by selecting the Disk options from the Mixing Options panel.

2. Yes, so long as you have the WAV file on a hard drive or other medium (such as a Zip drive) which can be read by the PC. The drive will need to be formatted accordingly.

3. Yes. SoundStudio can load stereo 16-bit WAVs, AIFFs and MAUDs plus RAW and 8-bit IFFs automatically (it knows which is which) and also mix up different types within the same song.

4. Putting audio samples on the CD is a very good idea. We'll see what we can do.

A nice package



1. I have recently bought an A1200 with an Amitek Hawk 4Mb upgrade and would appreciate some advice. Being an artist I was amazed at the graphical capabilities of the Amiga and would like to combine some animation demos with both music and sound effects. What software packages are the best for these specific uses?

2. Would I benefit from buying a CD ROM drive?

1. Cartoon Studio by Marco Vigelius is very easy to use, does the job excellently and is a bargain for the £5 shareware fee. Check a PD library. Alternatively WildFire by Andreas Maschke is incredibly powerful but harder to use, more expensive and very big.

2. Your first priority is a hard drive. Trying to do animations is very limiting on floppy and you'll have trouble using a CD-ROM drive without a hard drive. A CD ROM drive will be inestimably useful however. For example our cover CD last month actually has both the above packages on it, along with hundreds of megabytes of pictures, animations, image processing software, graphics utilities, clip art etc.

Dumb salesman

I have an A1200 with a 200 watt PSU, a 1Gb hard drive and a Viper 8Mb RAM card with an FPU. I saw your [illegible] CD ROM drives and would like to know where to get one. I met PC World and even though I showed them the list of compatible CD ROM drives in the December edition they told me they won't work on an Amiga. So where can I get myself a cheap CD-ROM drive?

Ed McCann, Belfast

Whoever it was at PC World who told you that knows nothing about Amigas, and was fobbing you off with false information instead of admitting their ignorance. This is far too common in electronic goods sales. All the drives in the list work fine, as does every 100% ATAPI CD ROM drive.

Save my cat!

I am a relative newcomer to the Amiga and have this far managed to get along quite nicely in the battle to get to grips with the machine via a policy of dogged determination and always taking time to study the manuals *(good man! – Andrew)*. Despite this I have come across a problem which has me kicking the cat. Please help if only for the cat's sake!

All I want to do is install some computographic fonts to my fonts disk so that I can use them with your excellent Design Works cover disk. Whenever I use the Intellifont tool, however it refuses to work. It does nothing more than let me type into the text gadgets, neither can I access the on line help, not as the manual instructs – select OK – as there is no OK button to select!

As a newcomer my machine is not yet expanded, although I have managed to install Magic Workbench and one or two other things such as a virus checker. In order to do this I have had to delete some stuff from the Workbench that I don't use. Have I deleted something crucial to the operation of Intellifont? This surely isn't the case as I have even tried using my original Workbench disks and am no nearer having CG fonts in Design Works. I can't help thinking I have missed something and have promised the cat a good hefty kick at MY arse when I get to the bottom of this. Should you decide to solve this problem for me I shall cast your images in chocolate and ... *(we can't print that! – Andrew)*

Andy MacDonald, West Lothian

I am puzzled. I can't find any reference to "... select OK ..." in the manual, and the help is built in and should work straight off. The purpose of Intellifont is to convert CG fonts into bitmaps of a specific size to save space, but it is not actually necessary for using outline fonts with DesignWorks and similar packages.

Design Works, in common with most packages, will simply look for a volume – either a floppy disk or an assign on your hard drive – called fonts, and get its fonts from there. Install your outline fonts to a separate floppy and name that disk "fonts" and you can use that without deleting from your normal fonts disks. You will find that most public domain libraries will sell disks full of outline fonts which are ready to go, and this is probably your best solution in the short term.

The purpose of Intellifont is to convert CG fonts into bitmaps of a specific size to save space, but it is not actually necessary for using outline fonts with Design Works and similar packages. Each font comes with a directory and files called name.metric and name.font. If these three things are copied to your font directories, Design Works can use the font.

Runaround...

In my efforts to keep the Amiga [illegible] in Singapore (where I have recently [illegible] Computer). I have [illegible] my hard disk to serve not only as a video processor [illegible] player but also as a World Wide Web browser and multimedia [illegible]. I have an A1200 with a Viper A1230 8Mb of RAM and a Surf Squirrel connected to a CD ROM and Zip drive.

1 My accelerator gives off quite a bit of heat, making the whole trap door area hot. Is this normal? Should I do anything about it?

2 The machine will not boot when I plug the Surf Squirrel in. Instead it goes through some kind of endless tune/sound attempting to boot Workbench on the hard drive, failing, rebooting, going to the hard drive and so on. If I plug the Squirrel in after boot up everything is fine though. Does this sound like a termination problem? I have the Zip as the last drive set to terminated.

3 I have had some problems with the Zip drive, both on the A1200 and on my A2000 Tpaster. It is unreliable, giving read errors and often I get a loud clacking noise while the yellow light flashes for what seems like eternity. Does this sound like a defective device?

Yvonne Morlew, Salisbury

1 '030 accelerators normally run hot. Unless your machine crashes a lot, this is not a problem, but it can only help to cool things down. Passive heat sinks can't hurt but a fan or even a peltier effect CPU cooler would be better.

2 The most likely answer is that there is something wrong with the way your devices are set up. Make sure that the CD-ROM and Zip have unit numbers which are different from each other and greater than 1 (0 and 1 are used by IDE devices such as your internal hard drive) and that the numbers you configured them with in software are matched to the numbers they are set to at the back of the drive. Also make sure that they both have a lower boot priority than your hard drive (remember low value = high priority and vice-versa).

3 It does sound as if it is probably faulty. Check it on an entirely different set up, such as a colleague's PC, just to make sure it isn't your software setup which is at fault.

Crash!

For Christmas I received an A1200 RAM board with a 1MB 72 pin SIMM and a 28Mhz FPU. After installing it correctly I [illegible] playing Worms to finize on my second game. I loaded the game [illegible] the problem occurred. I [illegible] the board and received a new one, but the same problem occurred. I sent the board back again in case I had the bad luck of receiving two damaged boards, but still the problem occurred. I have an A1200 with an internal hard drive, an external floppy and the Gasteiner RAM board.

Sean Crooks, Cleveland

It is worth checking the placement of the SIMM in the RAM board. If it is a little loose, regular crashes are bound to result. Make sure that the clips are holding it properly in position. However the most likely answer is the old curse of Commodore, the overstretched power supply. The internal hard drive, the external floppy and the RAM board are all drawing power from that poor feeble Amiga power supply, and the chances are that it just can't cope. Try unplugging the external floppy and see if the problem gets better or goes away. If it does then replace your power supply with a bigger one. The Wizard Developments (tel. 01322 527800) PowerBox supplies more power than you could ever need for £49.99, so get one of those and your problems should be over.

Corrupt pics

1 I have been using Imagine 3 and now 4 since you gave it away on your cover disk/CD ROM and I'm just getting the hang of it thanks to your wonderful tutorials. The boys in the office have just got an new Pentium PCs for CAD CAM and have asked me to render a 3D backdrop for Windows95.

I have rendered two scenes but when I load them into ImageFX 1.0 from the cover disk they appear to load and only part of the picture is visible although they load OK in Fastview. It is only Imagine pictures that I have trouble with, but not all of them. Have you any idea what is wrong?

2 On a separate piece of my hard drive I had a look at RAM:ENV and found a lot of prefs for programs I have tried from cover disks and have deleted. How can I delete them and get a little RAM back?

3 Will PC multimedia speakers work on my A1200?

Colin Baker, Kent

1 Fastview is likely to cope with certain images that ImageFX can't, especially if you have a more up to date version of Fastview. However, the ImageFX coverdisk should load anything that Imagine 3 or 4 produces, so I suspect your installation of ImageFX has lost something. Make sure that all the files in the ImageFX/modules/loaders drawers are there. The other possible cause of trouble is the IFFParse library – make sure it is in your Libs: drawer.

2 You will find the archive for these files in the prefs/env-archive directory of your system disk/boot partition. Just delete them from there and they won't bother you again.

3 Yes, but they come with a small stereo jack socket, so you will need a simple cable converter.

How to write to Q&A ...

You can send your technical problems (or answers – Ed) to CU Amiga by the following means:

By letter to: Q&A, CU Amiga Magazine, 37-39 Millharbour, Isle of Dogs, London E14 9TZ

E-mail: CUAmiga@CU-Amiga.co.uk

We can accept letters or text files on floppy disk.

PLEASE DO NOT SEND SAEs. We regret that we cannot respond to queries directly by post or over the phone – only through the pages of the magazine. We appreciate that some queries need quick answers, but we simply do not have the time to answer every query we get. SAEs go straight in the bin, so please save your stamps!

Masterclass

Perl is tipped to be the next big thing in programming languages, so what can it offer us Amiga users?

This month we're going to look at something a little special: a new programming language. The language is "Perl" – and if you [illegible] heard much about it already, you will soon. Perl was developed by a gentleman called Larry Wall, and it's proving extremely popular with all sorts of computer users. Perl is said to stand for Practical Extraction and Report Language – although it seems to be one of those cases [illegible] forming before the acronym. If you prefer, Perl can stand for Pathologically Eclectic Rubbish Lister.

Perl's many things. It's a programming language, a little like ARexx, and it's terrific for developing scripts which need to perform common but tedious file maintenance tasks. Like ARexx, it's also a great language for gluing other applications together, and expanding their features. For example, Perl is currently enjoying favoured status as the most useful language for Internet applications. When you visit a web site, it could be a Perl script which runs in the background and provides new facilities and functionality. In particular, Perl's ability to process text strings and extract vital snippets of information makes it ideal for dealing with everything from URL addresses to files of statistics and data.

Perl necklace

Perl is closely linked with the Linux operating system. Linux is a free UNIX clone available for all manner of systems, including 680x0 based computers like the Amiga, and Intel based systems like the PC. Like Linux, Perl is freely distributable, and has been tamed and updated with loyal gathering of users on the Internet.

The good news is that Perl is available the Amiga, and not only that, but the most current release, the widely respected Version 5, is supported by Tim Rüssen. You don't have to be running Linux to use this port as it is designed to be run under AmigaDOS, made possible because the C source code to Perl is available.

The bad news is that a Perl program looks rather different to any other programming language you may have used before. A particularly confused program may look as though your pet cat has walked over your keyboard. It's a little like C, a little like other UNIX shell scripting languages and a lot like gibberish. It soon starts to make sense though!

Where to get it

Amiga Perl can be obtained from the Aminet. The file you are looking for is "Perl5_002b.lha". There is an associated file called "Perl5_002src.lha", but you are unlikely to need this unless you plan on re-compiling the Perl programs yourself. You can either download this file or find it on the Aminet CD ROM series, it located in disk 'd' of the Aminet compilation Set 3.

You might find that you need one or two other files and libraries too, depending on which features you plan on using. If you have installed some Internet tools you could find that you have all you need already, but be prepared to look around for extra files.

Using Perl

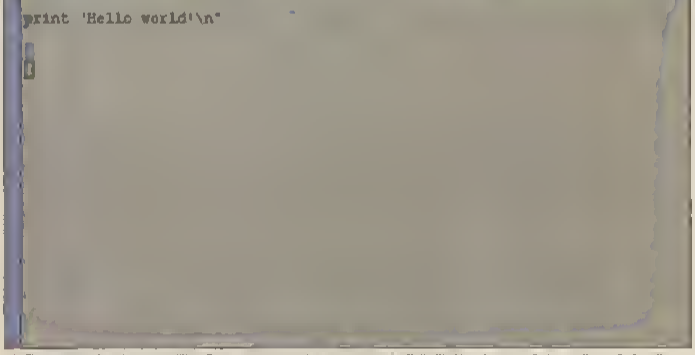
A Perl program takes the form of a plain text file, in the same way that an ARexx file is a plain text file. You start a Perl program by using the command "perl", followed by the program name (again think of the ARexx command "rx"). Before your program runs, you may get an error about temporary files, so enter the following at the shell:

```
assign tmp: ram:
```

Now you are ready to enter your first Perl program. Using your favourite text editor, enter the following text, and then save it to RAM Disk. See fig1.

Excuse the lack ustre "Hello World" text printing example. Predictably, it doesn't do anything exciting, but it's traditional. Already you know a few things: comments follow hash marks, lines end in semicolons and "\n" means take a new line. See fig2.

That's the hard part over with. If you can get this program working, you have successfully installed Perl and managed to create a suitable text file. You now



▲ The unwritten law that states "Your first program in any language must print Hello World to the screen" also applies to Perl, sadly

have all the tools at your disposal needed to become an expert in Perl programming. In fact you don't even need me anymore as there is copious amounts of documentation included with the Amiga Perl port and more available on the Internet.

However here are a few more vital pieces of information to help you get started. After you have read these look to the other documentation.

Simple programming

Variables in Perl are well differ[illegible]. You might be used to defining the type of a variable but Perl only wants to know if it's a single item such as a number or a string of text or a list of such items. The single item variable is known as a Scalar and the list as an "Array".

If you want to define a scalar variable you must precede the name with the dollar sign. Don't get this mixed up with the use of the dollar sign to mean a string in a BASIC-like programming language. In Perl all scalar variables have the dollar sign. Here are some examples of scalar variables, notice how you can mix strings and numbers. See fig3.

You can see from this example how both numbers and strings can be added. There is a special "add to" function for strings to add (or concatenate) them together. There has to be otherwise it would be confusing when you tried something like

```
$first = "123";
$second = "456";
$add = $first + $second;
$cat = $first . $second;
```

Try this program to see what I'm talking about. The difference should be pretty obvious when you print out two variables $add and $cat.

Because every variable is preceded with the scalar symbol it is easy to include the variables with in other strings. Here's an example (remember – everything following the "$" is a variable and the value of the variable will be substituted for it). See fig 4.

When using arrays you use the @ symbol instead of the $. Here's an example which creates an array called names and then assigns a list of names to it. This list is then used to assign values to other variables. See fig 5.

You can also address elements in the list in a more traditional way like this

```
$second = @names[1];
```

The elements are numbered starting with element 0, then 1 and so on.

There are other variable types too, for example "hash" types which allow you to reference values with strings rather then numbers, like a miniature database.

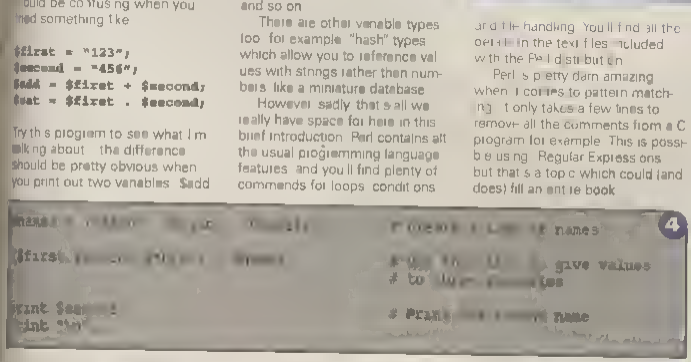
However, sadly that's all we really have space for here in this brief introduction. Perl contains all the usual programming language features, and you'll find plenty of commands for loops, conditions and file handling. You'll find all the details in the text files included with the Perl distribution.

Perl's pretty darn amazing when it comes to pattern matching. It only takes a few lines to remove all the comments from a C program for example. This is possible using Regular Expressions, but that's a topic which could (and does) fill an entire book.

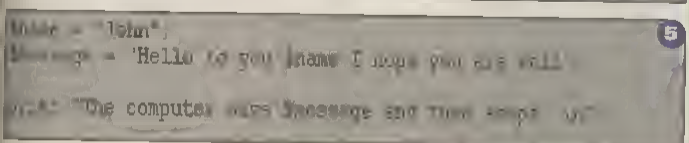
Many Web pages make use of CGI (Common Gateway Interface) scripts to perform special tasks and Perl is an ideal language. If you fancy getting yourself a job working for Internet savvy companies (not a bad line to be in at the moment) make sure you spend some time getting to know Perl. The mention of it on your CV is particularly valuable at present and that will only increase. ■

John Kennedy

3



4



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Perl, Programming and the Internet

With so many computer languages to choose from, does the world really need a new one? Good question, but with new innovations (such as the Internet) there always seems to be a new language coming along to make things easier for us.

CGI (the common gateway interface) is a method of letting Web Servers (the systems which provide Web pages over the Net) execute programs in a variety of languages. Most servers will let you use Perl, or C and the with Microsoft getting involved in a big way there is now support for Visual Basic. Even Apple Web Servers allow scripts to be written in AppleScript (the version of AReXX for Macs).

Don't confuse these languages with Java, JavaScript and ActivoX. These languages were created to provide extra functionality at the browser end: the program (or Applet) is downloaded and executed locally. This is why an Amiga browser can happily (and probably unknowingly) run Perl and C CGI scripts, but won't yet cope with Java applications.

More Perl

For more information check out the Perl websites at www.perl.com/perl and www.perl.org, and also the many Usenet groups. If you are a computer book person, the definitive volume is "Programming Perl" published by O'Reilly and written by Larry Wall, Tom Christiansen and Randal L. Schwartz. ISBN 1-56592-149-9

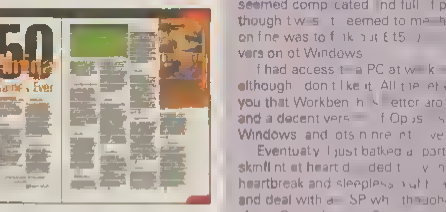
Backchat

Make yourself heard: send your views and opinions to Backchat, CU Amiga, 37-39 Millherbour, Isle of Dogs, London E14 9TZ, UK. Or E-mail to beckchat@cu-amiga.co.uk

Shifty 50

I was really pleased to see classics like Cannon Fodder in the 50 Amiga best games on the Amiga CU Amiga April 97 issue, but what about Lemmings?

I mean, I recall when your magazine was really commending Lemmings. You even compared your best game ever Worms to Lemmings. OK, there's no real relation between a game where you kill everything in sight and where you stop the little things dying because they've got no brains but Lemmings is a really good classic. What were you thinking of? The phrase Oh no, no more Lemmings seems suitable.



James Tegue, Durham

'Availability is the key word here. We harassed all the major (and minor) Amiga game suppliers in the UK to make sure all of the games in our Best 50 Amiga Games Ever chart were all available for readers to buy, so certain classics are missing because they seem to have totally sold out. Originally planned was a section listing some of those games that didn't make the chart due to the availability factor. Among others these include Frontier, Rainbow Islands, Interceptor, Carrier Command, Thunderhawk, Starglider II, Dungeon Master, Super Hang On, Bubble Bobble, Megalomania, Hunter, Settlers, Silkworm, Xenon II, Sim City 2000, R-Type I, Virocop...

There's almost enough there for another top 50! By the way, if anyone knows where you can get any of these, please let us know and we'll let your fellow readers in on the secret.

Esperanto crazy

During the last few years they enjoyed the PD pages and often brought games, but it's not the strength of the comments there. However, I think Andrew Korn should retract his comment on Esperanto (CU Amiga April 99). Esperanto is a language created by Dr Ludovic Zamenhof in 1887. His idea was that everyone could learn Esperanto as a second language and be able to communicate on an equal with anyone, anywhere in the world. Growing up in Bialystok in Poland, he saw it's the problems between Russian, Polish and Jewish communities were caused partly by their inability to understand one another and their unwillingness to learn one another's language. He reasoned that if everyone could learn a common neutral language, no one would be at a disadvantage when speaking with foreigners. It was not a crazy notion.

Esperanto is not an academic [illegible] and 90% of Esperantists do not speak English. If Andrew Korn thinks it's a failure, he should try attending one of the Universal Congresses, held every year (this year in Adelaide), where thousands of people from all over the world meet and talk to one another in Esperanto.

Something Andrew Korn did get right is that Esperanto is very easy to learn: spelling could not be simpler, pronunciation regular (each letter has one sound only) and there are no irregular verbs.

I realise this letter has nothing to do with computing in general nor with the Amiga in particular, and I don't expect you to print it, but I had to write as ill informed comment makes me angry.

Brice Withers, Bristol

Go on, get netted!

letter of the month

[illegible] you Amiga owners out there w[illegible] feeling disillusioned and are on the o[illegible] of buying a PC. I found myself in a similar situation. For a long time I had wished I could get myself connected to the Internet but [illegible] of all the helpful articles in the [illegible] the process seemed complicated and full of pitfalls. Very fond of my Amiga though, I wished it seemed to make the easiest way to get on line was to fork out £1[illegible] for a PC, but just the Internet-ready version of Windows.

I had access to a PC at work and was [illegible] Windows although I don't like it. All the [illegible] you that Workbench is better around than Windows, [illegible] and a decent version of Opus [illegible] than Windows and lots more besides.

Eventually, I just balked at parting with the [illegible] being a skinflint at heart, I decided to [illegible] heartbreak and sleepless nights [illegible] software and deal with an ISP who, though the name Amiga referred to a cheap Spanish wine. So now to the point.

If you're in the same situation, I should [illegible] completely trouble free, took me only a couple of hours to sort and has transformed my aging system into a very reliable [illegible] to the rest of the world. I now have [illegible] software, information, contacts, news groups, other Amiga related stuff than you [illegible] age. When Bill Gates [illegible] want to get days [illegible] PC [illegible] of the same calibre.

So, rush out get Miami, Term, TCP [illegible] even I got [illegible]. Try both [illegible] excellent easy [illegible] stat and [illegible] today that you [illegible] the manuals, [illegible] access to all the communications [illegible] for a small registration fee. Even [illegible] than £90. Don't sell your Amiga, just [illegible] PC [illegible] to the rest of the world. Amiga [illegible] anybody who [illegible] box under their [illegible].

Richard, Isle of Wight
<bonesy@enterprise.net>

Andrew replies: Before you get too upset, read what I wrote more carefully. When I said it was crazy, I was being ironic, as you should have guessed by the 'even crazier everyone ignored him" line which followed. I stand by my other comments – it is a failure in that it has NOT become the lingua franca it was intended as, and is spoken only by enthusiasts. Esperanto is indeed very easy to learn, but is also very flawed – better international languages have been developed since, including Ido, which is a rationalisation of Esperanto. Zamenhof was a greater visionary than he was a linguist.

Aborted A\Box?

Oh, everyone else has had their say about the new A\Box thingy so now it's my turn. The A/Box looks pretty impressive but asking £1000 for it's a bit much isn't it? Wasn't the whole Amiga concept about an easy to use cheap home computer?

Well I don't think £1000 is cheap. If companies are going to charge that I can see people either sticking with their trusty Amiga or being very stupid indeed and getting a PC simply because there is a lot of software available for it. I think the best bet would be to make a new upgrade of a new Amiga like they are thinking of with the PowerPC. What compaq nies need to combine is the power/speed of a PC with the ease/multitasking and friendliness of the Amiga. Us Amiga users are tired of being mucked around with Escom and VISCorp. It's time to turn over a new leaf, get a new Amiga out and save us all.

Even if they muck up again the Amiga is going to be the very first computer which will keep on going and being supported. I know a lot of companies have left the Amiga scene but what about Vulcan, Mutation and the newly arrived Islona and APCTCP – they are trying to keep it going so I think we should help them by sending letters and E mails of thanks and ideas for new high spec games. Also why not dig out those programming books and start making some great stuff for the Amiga and help it along on its tough journey.

It's time to pull together and join forces. Big companies have made their money and left so now it's up to us to keep the Amiga going. Any comments on this can be emailed to Cool@Dcandy.demon.co.uk

Chris Seward, smallsville

To you, the Amiga represents a cheap all-round home computer, but don't forget the likes of the A2000, 3000 and 4000 and tooled-up A1200s which to many are professional creative computers. The first Amiga was the A1000, which was priced out of most people's reach, but that spawned the cheaper A500. Who knows, maybe the same could happen with the A\Box. It may be unlikely we'll see a totally new 'Amiga' released for under £400, due to the costs of developing and producing new technology. The low prices of the A500 and A1200 were possible mainly because the technology had already been developed and put into economical production runs, thanks to their respective forerunners the A1000 and A4000. Still, the fact remains there is definitely a massive potential market for a cheap but capable home computer. Perhaps this is where Gateway are headed.

F1GP Enhancer

I would like to make a quick comment about F1GP from Microprose. I'm very happy that it was listed in your top 50 games (although disappointed that Stunt Car Racer was rated higher) and would like to advertise to your readers how the game can be improved.

Get F1GP Ed from the Aminet or a PD library. It allows you to edit *everything* in the game and now comes with datatypes for the 1997 teams. If you have an accelerator/Fast RAM you can alter the frame rate – the original game runs at 8 frames per second but with my Blizzard 1230/IV it runs at 20 frames per second.

Buy a Quick Joy joypad from Premier Mail Order (£9.99). It makes the game much easier to control – beat Damon Hill and Michael Schumacher in Ace Mode! If you do use F1GP Ed make a backup as it writes data to the boot disks.

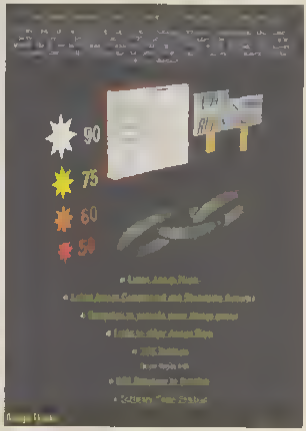
Also referring to the top 50 games, considering Elite 2 Frontier received your highest ever rating (97%), I can't understand being in the top 50 (although I am probably wrong – please ignore this paragraph if I am). I understand that almost a completely different editorial team made the decision for the top 50 when Frontier was released and opinions differ, but does the Frontier example perhaps suggest that since opinions differ so widely the top 50 games was not such a wonderful idea as it is so subjective?

Nice idea to have the competition at the end though! Thanks for a great magazine and great CDs (I'm just off home to put DOpus Print Manager, MUI 3.7 and Voyager on my hard disk). Thanks once again.

PS: I'm studying information/computing at Loughborough University. I am a *big* Amiga fan and just as big a Damon Hill fan, watch out for the number 1 plate on his Arrows car on March 11th.

Andrew Clarke, smallsville

Thanks for those F1GP tips. Check out the first letter for the reason Frontier missed out on the chart. As to whether it was worth doing it at all, with everyone's differing opinions and the magazine's ever evolving staff (we began as single cell organisms during the early 80s you know) there is never going to be total agreement and anyway we like a bit of a debate. Oh yes, can you spot the time lag between E mail and magazine publishing? We seem to remember Hill's first outing wasn't quite the championship winning performance many hoped for. It just goes to show how far a good Williams Renault can get you – onto the starting grid at least!



Quake rocked

I just noticed the Amiga Quake site has been updated – well it's closed actually. I suspect it may be something to do with copyright infringement but does anyone know better?

J. Frecknell, Cyberspace

You suspect right. It seems ID Software (Quake's creators) have taken a dim view of Amiga Quake (the unofficial Amiga Quake engine) and demanded it ceases distribution. Watch this space for developments though.

Amiga flame

I bet this web page you mentioned would be interested in. I've put two pertinent articles in it to my friend Hill. One is a letter for


Quake: the unofficial Amiga version disappears

Continued overleaf ▶▶▶

the game TFX to be released by DID. So far I have sent off the first collection of 50 responses to DID that I have collected over the past two weeks. The other is a general Amiga games petition that will be sent out to as many past and present Amiga developers to tell them to either continue supporting the Amiga or return to the platform. Games like Putty Squad, TFX, Infernos, Brg Red Adventure (now getting a release - Ed), Sim Tower etc have been abandoned even though they might have sold well. I am looking for public try for both petitions as I think they might be some help to the Amiga situation and if I am very lucky might even result in some of the games mentioned being finished and released. Would you please let your readers know about my campaign? The web link is as follows
HTTP //www mfj ulst ac uk/~cnw8 26

Ed Collins, Amiga Fiame

Where's Graffiti?

Do you have any plans to review the Graffiti graphics adaptor? I am interested in this product but I am a bit sceptical because of the limited amount of support it has received. I would also like to see some speed tests so I can see exactly how much faster it would be particularly PCs

Jay, Info Super-highway

We had actually hoped (and planned) to bring you a review of this compact little 'graphics card' some time ago, but have not been able to do so because no-one seems to be willing to take on major distribution for it – even those who do list it in their product range seem to be unwilling to send it to us for review. Unfortunately it seems to be fu a chicken and egg situation regarding software support with few programs being written to use it. One solution would be for someone to start selling it in a package with some relevant software which might be enough to get the ball rolling

20:20 Cybervision

I got a little [illegible] Matt Bettinson [illegible] review of the Phase 5 CyberVision 64 board in the March [illegible] My CyberVision 64 3D arrived on the [illegible] day I read it at review. Best little [illegible] installing the board in my A4000 all I can say is WOW. I could not be happier with this upgrade to my system. I don't know what revision of CybergraphX he had for the review but the one I received worked with no adverse effects. He also didn't mention which mode promotion software he was using. This is a must and ModePlo version 4 18 does a super job of getting most of the software I have running under CybergraphX.

I will agree with Mr Bettinson that to get the most out of this board you really need the Scan doubler/Monitor switch. Unless you plan to use two monitors this little card allows you to run software that can't be promoted to a CybergraphX display. Brilliance demos and most games fall into this category. It's a sad state of affairs when I can't get my games working. On a side note it kind of surprised me to read in the monitor switch manual that it can be used as a stand alone card. Seems like a cheap way to hook up a PC monitor.

Anyway I love this board. It makes my Amiga run like a whole different machine. I'll bet that if Mr Bettinson tried this board with a later version of CybergraphX it might fare better in a review.

Craig Nori, cnori@usa net

The Cybervision 3D review was a difficult one, after we raised the subject with Phase 5, could we be sure that the software would be fixed by the time we went to press? Matt wasn't happy with the product considering it wasn't up to the standards of the former version of the card, or those of Phase 5 in general. Fortunately Phase 5 took heed of the criticisms. See the addendum in the Picasso IV review in this issue

XCAD mad

I am writing to ask if there are any experienced XCAD users out there who could offer me some technical help or advice on how I can set the program up as I have been unable to obtain the manual. XCAD users should write to me at this address
Mr Tony McGartland
11 Lammy Drive
Omagh
Co Tyrone BT78 5JB
Northern Ireland

Home truths

A lot of speculation is taking place at the moment and a lot of people seem to be pinning their hopes on some kind of mass Amiga revival particularly in the games market.

In my opinion it's about time a few facts are faced. The Amiga was a great games machine in the late 1980s (I can still remember being amazed by Marble Madness and Defender of the Crown) but it has no chance of competing with the current games consoles or top PCs. The games that are reviewed in CU Amiga are laughable when compared to current Playstation titles. The defence of its playability that's important not flash graphics does not by and large turn out to be the truth. There has been a trend recently to release old arcade games conversions on the Playstation but to my horror the games that I remembered from my youth do not have lasting appeal today.

I think that the Amiga will survive but not as a games machine. As a keen gamer I knew I would have to upgrade to play better games but realised that the Amiga fulfilled all of my other computing needs. I therefore decided not to get a PC but to keep my Amiga and buy a Playstation. I now feel I have the best of both worlds: a superb computer for the serious stuff and I can play games that a Pentium would struggle with. Oh and with the money I saved by not buying a PC I've upgraded my trusty A1200 with a hard drive accelerator and extra RAM.

Instead of highlighting the Amiga's weaknesses with (sad) features like The 50 Best Amiga Games Ever (and wasting five editorial pages that could have been put to much better use like a bigger Opus 5 11 guide) perhaps CU Amiga could devote its attentions to areas that would persuade a potential purchaser that the Amiga is a worthwhile proposition like DTP video music 3D graphics animation Internet access etc. No sane person would go out and spend £400+ on an Amiga to play Bogtrotter. I am embarrassed when a work colleague flicks through my magazine and sees the games section. It just ruins the Amiga's credibility a shame when a lot of the serious software is of such a high standard.

I think that CU Amiga (and the Amiga market in general) would be greatly improved if coverage of games was dropped in favour of great features like Build Your Own Tower which I thought was brilliant.

Graham Robson, Cleveland

To the Point...

No Go Show

I was somewhat [illegible] read [illegible] you April issue that [illegible] would be [illegible] display at [illegible] Amiga stand during [illegible] Amiga Show in May [illegible] won't be temptated to [illegible] the show on the [illegible] ally get to see TFX. Fingers [illegible] there's more chance of [illegible] Best turning up

Allan Brown,
AllanB@delfin demon co uk

A\Box poster?

Hi! Could you put a BIG poster of A\Box on your magazine? I think it would be nice with some computers on my wall.

Erik Nylund, Mexmo Finland

Nice idea. We'll see what we can do.

Floppies out

I should like to second Miguel Ramos review that you should drop the [illegible] floppy and only have a CD-ROM version of the magazine. If the encouraged PC owners [illegible] also do the same for A[illegible] owners and this will mean that we should no longer have floppy only machines holding the market back.

Ian Bell Coventry

Fuming of Wakefield

In the March 97 issue I was fuming to see that the source code to ABADII was given away on the CD edition. I don't have a CD-ROM and I don't see why people with disk drives should be left out. We're just as loyal to the Amiga the only difference is we're not as rich. Could you please do something about this like have an extra disk on the cover even if you have to raise the price a little?

J Seeney Wakefield

There's a very simple reason why it wasn't on the floppy edition: it was well over 60Mb in size (that's 74 floppy disks, according to our CD-to-floppy disk conversion expert Andrew Korn). However seeing as you're in Wakefield, as are Team 17 maybe you could pop down to their offices with 74 disks under your arm and see if they'll oblige. Well it's worth a try.

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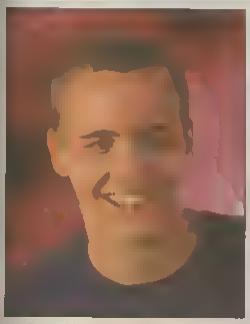

by Tony Horgan

Who would have thought it? While rival likes of VIScorp and QuikPak were shouting about their plans for the Amiga, the bovine camouflaged PC giant Gateway 2000 were waiting in the wings, doing their homework and preparing a bid of their own.

The big question is of course, what plans do Gateway have for the Amiga? It seems at this stage they're not entirely sure themselves. However, unlike VIScorp and QuikPak, Gateway seem to be taking a more considered approach to its PR, perhaps not wanting to be drawn on decisions that have not yet been finalised. Subjected to the kind of pressure the inquisitive Amiga community is capable of, it was predictable that the enthusiastic mouthpieces of VIScorp and QuikPak would divulge plans and goals that they couldn't guarantee would be followed through, especially since neither had actually secured a buyout deal.

While Gateway have been very tight-lipped about the whole affair so far, a representative did liken the Amiga acquisition to buying a box marked 'Stuff' on the basis that something in there would most likely find its use in some way. This is not really what we want to hear, but let's not get carried away – this single comment shouldn't be inflated to the status of Gateway Amiga policy. It was a single answer from a question posed at an Amiga related Gateway press conference. It may well be that somewhere, somewhere at Gateway 2000 know exactly why they bought it, but wants to see it rough some plans before any announcements are made. In fact, this is the most likely situation. Even a company with a $5 billion turnover doesn't throw money around on a whim. However, a comment such as that is bound to give the impression that they were simply browsing and thought they'd pick it up on the off chance. In the way a discounted product in a shop window could trigger an impulse buy.

> **"the Amiga acquisition was like buying a box marked 'Stuff', on the basis something in there would be of use."**

Whatever happens, at least for the near future, this development has given the Amiga scene a shot in the arm. Even though we may not be much closer to knowing the Amiga's fate, at least we can now see a path out of the frustrating void in which the Amiga has sat motionless for the last few years.

On a different note, it was with regret that we heard of the closure of Amiga User International, the UK's first ever Amiga mag, on which I worked for many happy years. Respect to Antony Jacobson, all the AUI crew for ploughing their particular furrow of the Amiga press. I'm sure you'll join me in wishing them all the best for the future. ■

■ Tony Horgan is CU Amiga Magazine's Editor.

The real jewel in the Amiga's crown

by Mat Bettinson

I'll come out and say it – the Amiga is a commercial insanity. If someone was going to code the absolute best application in a genre, they could make it half as good, ten times as expensive and still be a comfortable living in the PC. Instead, Amiga authors decide they could do better and set out to build The UltimateProgram (TUP for short) for your Amiga.

These authors slave away implementing all of the things Amiga users demand as standard: top quality installer, ARexx interface, RTG friendly multithreaded asynchronous cybergraphic executive GUI library front end from hell. That's before they get onto what the program actually does! Then there's the trivial task of making their TUP getting it beta tested, constantly fitting it by spending so much time but their work/studies suffer and then rewriting it in raw assembly – it's faster than its equivalent on a Quad Pentium Pro 233Mhz.

I'm exaggerating of course, to a degree. Bottom line is that while us no-my outrageously specced up PC, nothing is half as good as it is on the Amiga. You know this. I know this. Every reader of CU Amiga Magazine knows this. Perhaps even Gateway know this.

> **"while using my outrageously specced-up PC, nothing is half as good as it is on the Amiga."**

My belabouring point is that it's these backyard, overworked and underappreciated programmers who make the Amiga what it is today. It isn't the Amiga's hardware anymore.

You're all using shareware and demos of commercial software, older full versions from coverdisks and so on. Please consider that not only are these packages worth the money all asking people but that there's little more you can do to keep the Amiga thriving than paying for software. You already get so much virtually for free on coverdisks, so spare a thought for Jimmy Bob bashing away at TUP. It's just might be the real reason the Amiga rules what it is. Anyway, hooray for Gateway. ■

■ Mat Bettinson is CU Amiga Magazine's Technical Editor.

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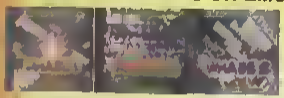

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